Health Savings Account-Eligible High Deductible Health Plans: Updating the Definition of Prevention
Acknowledgments

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**The University of Michigan Center for Value-Based Insurance Design (V-BID Center)** is the leading advocate for development, implementation and evaluation of *clinically nuanced* health benefit plans and payment models. Since 2005, the Center has been actively engaged in understanding the impact of innovative provider facing and consumer engagement initiatives and collaborating with employers, consumer advocates, health plans, policy leaders, and academics to improve clinical outcomes and enhance economic efficiency of the U.S. health care system.
Executive Summary

High-deductible health plans (HDHPs) are an important and growing part of the health insurance landscape. By some estimates, as many as 80 percent of large employers may offer an HDHP in 2014. In 2013, more than 15 million Americans received health coverage through an HDHP, a more than a threefold increase since 2007.

As outlined by the U.S. Treasury Department, individuals with an HSA-eligible HDHP are required to pay the full cost of most medications and services—in theory utilizing pre-tax HSA funds—until deductibles are met. However, the 2003 authorizing legislation and further guidance include a safe harbor allowing plans to cover primary preventive services, those typically deemed to prevent the onset of disease, before the deductible is satisfied.

Services or benefits meant to treat “an existing illness, injury or condition,” are excluded from first-dollar coverage in HSA-eligible HDHPs, which encompasses most secondary preventive services. For example, plans are prohibited from providing first dollar coverage of disease management services such as insulin, eye and foot exams, and glucose monitoring supplies for patients with diabetes.

As chronic disease conditions currently make up 75 percent of total U.S. health spending, appropriate chronic disease management is an important tool to lower long-term health care costs. As the market for HDHPs grow, it is important that they maintain the flexibility to allow for effective health management of all beneficiaries. This report addresses the strict definition of prevention that an HDHP must follow for it to include a pre-tax health savings account (HSA), and how this restriction limits the effectiveness of current plans. A potential solution - allowing HSA-eligible HDHPs to provide first-dollar 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.

A multi-disciplinary research team from the University of Michigan’s Center for Value-Based Insurance Design, Harvard Medical School, and the University of Minnesota conducted a multi-part project to investigate the impact of updating the definition of prevention for HDHPs to include selected secondary preventive services that are frequently used as health plan quality metrics and included as elements of pay-for-performance programs. Specifically, the project aimed to: 1) determine the premium effect, actuarial value, and estimated market uptake of the novel HDHP plan that covers these evidence-based services outside the deductible, and 2) explore through interviews whether insurance industry experts found coverage of secondary preventive services a worthwhile endeavor.
Quantitative analyses estimated that a novel, expanded HDHP plan would necessitate a 5-6% increase in premiums and would yield a slight increase in actuarial value. Simulation models revealed that the introduction of expanded HDHP would result in significant incremental HDHP adoption in commercial insurance markets.

Qualitative interviews with an array of health insurance and employee benefit experts yielded diverse perspectives. Many respondents indicated that expanding first-dollar coverage to secondary preventive services would be financially and ethically appropriate, while others felt that the existing HDHP structure was adequate. Respondents expressed openness to exploring ways to reduce the costs of their health care coverage and promote employee engagement, though many expressed ambiguity over whether HSA-eligible HDHPs are the right tool to address chronic disease care and management – even with the option to include certain secondary and tertiary services before the deductible.

Utilizing the well-accepted and medically common definition of prevention that encompasses both primary and secondary preventive services could enhance HDHP attractiveness to potential purchasers and accelerate benefit design innovation. Expanding the definition of prevention to include evidence-based services that prevent chronic disease progression and related complications could enhance the ability of HDHPs to improve clinical outcomes while preserving the well-documented capacity to engage consumers and contain costs.
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Background: Defining Prevention One Decade Ago

As health care costs continue to consume an increasing percentage of the country’s employer and household budgets, high deductible health plans are a growing part of the health insurance landscape. In 2013, nearly 60 percent of firms with more than 5,000 workers offered an HDHP, either coupled with a health reimbursement arrangement (HRA) or health savings account (HSA). According to the 2013 annual health benefits survey by Towers Watson and the National Business Group on Health, 66 percent of companies with 1,000 employees or more offered at least one such plan in 2013. This figure is expected to grow to nearly 80 percent in 2014, according to the survey. Among nearly 15 percent of companies surveyed, a savings account-based plan was the only option available to employees—an increase from 7.6 percent in 2010. Enrollment trends continue to rise with 15.5 million Americans enrolled in HSA-eligible HDHPs in 2013, up from 6.1 million in 2008.

Created by the Medicare Prescription Drug Improvement and Modernization Act of 2003, HSA-eligible HDHPs have defined minimum deductibles and maximum out of pocket limits. For 2014, the minimum deductible is $1,250 for an individual and $2,500 for a family; maximum out-of-pocket limits are $6,350 for an individual and $12,700 for a family. HSAs allow beneficiaries to put a set amount of money in a tax-advantaged account to be used for medical expenses. The Internal Revenue Service (IRS) regulated savings accounts do not expire, are portable (not attached to employment, solely to the account holder) and can accept contributions from both account holders and employers.

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 beneficiary will pay out of pocket utilizing pre-tax HSA dollars. However, the statute includes a preventive care safe harbor via Section 223 of the Internal Revenue Code. 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 1871 of the Social Security Act, except as otherwise provided by the Secretary).” Per 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.”

However, preventive care is not clearly defined by the law and part of the confusion may stem from the reference to Section 1871 of the Social Security Act (SSA), which appears to be a typographical error. Section 1861 of the SSA, likely the intended reference, defines preventive services as they pertain to an initial preventive physical examination for Medicare, a one-time service offered to newly enrolled Medicare beneficiaries. 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 U.S. Preventive Services Task Force and other services “reasonable and necessary for the prevention or early detection of an illness or disability.” There is no explicit definition of prevention for non-Medicare populations in the MMA legislation.
IRS notice 2004-23 provides guidance on preventive care benefits allowed to be provided by an HSA-qualified HDHP without satisfying the minimum deductible requirement. These benefits include, but are not limited to, periodic health evaluations, routine prenatal and well-child care, child and adult immunizations, tobacco cessation programs, obesity weight-loss programs, and a number of screening services. Typically, these services are deemed primary preventive services.

IRS notice 2004-23 also states “preventive care does not generally include any service or benefit intended to treat an existing illness, injury, or condition” [emphasis added]. In the notice, the IRS requests comments on the “extent to which drug treatments, either solely by prescription or as part of an overall treatment regimen should be treated as preventive care and the appropriate standards for differentiating between drug treatments that would be considered preventive care and those that would not be considered preventive care”.

Question and answers 26 and 27 of Notice 2004-50 (2005-33 I.R.B. 196), presumably written in response to the comments received, refer to prevention as a continuous activity that in certain clinical circumstances can include services used by a person who has been diagnosed with manifestations of disease, such as heart attack or stroke. Heart attack and stroke are deemed markers of chronic disease, either coronary artery disease or cerebrovascular disease, with the goal of preventing progression or complications. Specifically, IRS notice 2004-50 states:

Solesly for this purpose, drugs or medications are preventive care when taken by a person who has developed risk factors for a disease that has not yet manifested itself or not yet become clinically apparent (i.e., asymptomatic), or to prevent the reoccurrence of a disease from which a person has recovered. For example, the treatment of high cholesterol with cholesterol-lowering medications (e.g., statins) to prevent heart disease or the treatment of recovered heart attack or stroke victims with Angiotensin-converting Enzyme (ACE) inhibitors to prevent a reoccurrence, constitute preventive care. In addition, drugs or medications used as part of procedures providing preventive care services specified in Notice 2004-23, including obesity weight-loss and tobacco cessation programs, are also preventive care. However, 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.

The exclusion spelled out in the last sentence above encompasses the bulk of secondary preventive services and prohibits health plans from offering these benefits before enrollees meet their deductibles. This exclusion also precludes purchasers from pursuing many proven disease management strategies. For example, HSA-eligible HDHPs are prohibited from providing first dollar coverage of disease management services including insulin, eye and foot exams, and glucose monitoring supplies for patients with diabetes until after the deductible is reached.
Updating the Definition of Prevention

Legislative efforts have recognized the desirability of promoting primary preventive services as a way to encourage both sound fiscal and health policy. Notably, section 2713 of the Public Health Service Act (which was created in the Patient Protection and Affordable Care Act) requires that new health plans, including HDHPs, include first-dollar coverage of selected, evidence-based primary preventive services.\textsuperscript{x,xii}

Primary prevention, while important, is a small component of overall health spending. By contrast, spending on chronic disease encompasses more than 75 percent of total U.S. health expenditures.\textsuperscript{xiii} Published literature supports that when individuals with chronic disease forego recommended services, it not only impacts their health, but also can result in higher aggregate costs.\textsuperscript{xiii,xiv} 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.\textsuperscript{xv}

Within HDHPs specifically, there is evidence that a focus on secondary prevention could be beneficial. One study found that patients who have HDHPs and chronic disease are more likely to go without care due to cost than those with chronic disease who have traditional plans.\textsuperscript{xvi} 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.\textsuperscript{xvii} As HDHPs continue to grow and encompass a larger percentage of the population, these patterns could impact overall health care costs and health quality.

Though there are a number of definitions of secondary prevention, the Center for Value-Based Insurance Design recommends it be defined as the prevention of complications from, or progression of, chronic disease. Chronic disease is defined by the Centers for Disease Control and Prevention as non-communicable illnesses that are “prolonged in duration, do not resolve spontaneously and are rarely cured completely,” including heart disease, cancer, diabetes and obesity.\textsuperscript{xviii} Notably, these types of secondary preventive services are frequently used as quality metrics by health plans and used as element of pay-for-performance initiatives for providers.

The V-BID Center also suggests utilizing recommendations from medical societies pertaining to chronic disease management to inform the definition of secondary prevention. For example:

- The American Diabetes Association recommends patients with type II diabetes mellitus receive the following: annual eye exams, annual comprehensive foot exams, annual screening for kidney disease, diabetes self-management education at the time of diagnosis, metformin as the preferred initial agent for glycemic control, ACE inhibitors in patients with diabetes who have high blood pressure or increased urinary protein excretion, statins in patients with diabetes over age 40 with risk factors for cardiovascular disease, and other secondary preventive services.\textsuperscript{xix}
The American Heart Association (AHA) and American College of Cardiology Foundation (ACCF) joint guideline on secondary prevention for patients with coronary and other atherosclerotic vascular disease finds evidence to support therapy with statins for lipid control, beta-blockers or ACE inhibitors for blood pressure control, aspirin, ACE inhibitors for patients with ejection fractions less than 40%, and several other pharmacologic agents in selected patients to prevent exacerbations and complications. AHA and ACCF also urge comprehensive cardiac rehabilitation following coronary artery bypass surgery or percutaneous coronary intervention.\textsuperscript{xx}

The United States Multi-Society Task Force on Colorectal Cancer guideline on colonoscopy surveillance after polyp removal finds evidence to support secondary follow-up colonoscopies at intervals less than the ten years used for primary prevention.\textsuperscript{xxi}

The American Association for the Study of Liver Disease and American College of Gastroenterology find strong evidence to support nonselective beta-blocker therapy for prevention of variceal hemorrhage in patients with cirrhosis who have medium to large varices that have not bled.\textsuperscript{xxii}

Additionally, the multiple chronic conditions working group within the HHS Office of the Assistant Secretary of Health selected 20 chronic conditions for a standard classification scheme and the IRS could link to this list in defining chronic disease. The list of 20 includes: hypertension, congestive heart failure, coronary artery disease, cardiac arrhythmias, hyperlipidemia, stroke, arthritis, asthma, autism spectrum disorder, cancer, chronic kidney disease, chronic obstructive pulmonary disease, dementia, depression, diabetes, hepatitis, human immunodeficiency virus, osteoporosis, schizophrenia, and substance abuse disorders.\textsuperscript{xxiii} This list could further inform the definition of secondary prevention.

As regulators consider the pros and cons of updating the definition of prevention, they will likely struggle with determining how to strike the right balance between ensuring entities have flexibility to design plans aimed at preventing progression and complications associated with chronic conditions and also ensuring the definition appropriately limits what services may be offered before the deductible is met.

To better understand the likely impact of an updated definition of prevention on HDHP design, price and uptake, a multi-disciplinary of researchers from the University of Michigan, Harvard Medical School and the University of Minnesota undertook a multi-part quantitative and qualitative analysis of the issue. Specifically, the research projects aimed to 1) determine the premium effect, actuarial value, and estimated market uptake of a novel expanded HDHP plan, and 2) explore through interviews whether health care experts found coverage of secondary preventive services a worthwhile endeavor and whether they felt these products would be attractive to employers and employees.
**Project Overviews**

**Quantitative Assessment**

**RESEARCH AIMS:**

The aims of the quantitative research were to estimate three specific outputs related to the potential coverage of targeted, evidence based secondary preventive services under the deductible in a HSA-qualified high-deductible health plan.

1) Determine changes in utilization of, and spending on, targeted secondary prevention services that result from a reduction in consumer out-of-pocket spending for these services;

2) Estimate the impact of increased utilization of the targeted services on aggregate spending and HSA-HDHP premiums;

3) Approximate the uptake of the expanded HSA-HDHP plan in commercial markets.

**METHODS:**

**Selection of Secondary Preventive Services:** Commonly used, secondary prevention services that are frequently used in health plan quality metrics and elements of clinician pay-for-performance programs were selected. These services have been previously identified in the published literature.

**Data Source:** Truven MarketScan Commercial Claims and Encounters (MarketScan) data from 2011 were utilized. The data are comprised of commercial hospital, physician, and drug claims with their associated spending amounts, as well as procedure and diagnosis codes. These data encompass 52 million enrollees per year in over 150 large private employers and health plans, and include a range of demographic and enrollment information. Enrollees include employees, spouses, and dependents, all of which are covered in commercial plans. Pharmaceutical claims are available for approximately 80% of enrollees.

MarketScan data include out-of-pocket components of spending (copayment, coinsurance, and deductible) as well as the payer contribution and any coordination of benefits or discounts. As displayed in Table 1, Selected secondary prevention services in were identified in the MarketScan data based on Current Procedural Terminology (CPT) codes for medical services, labs, and screening and National Drug Codes (NDCs) for prescription drugs.
### Table 1. Secondary Preventive Services Evaluated

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

**Analytical Approach:** A two-stage approach was used to estimate the impact of the change in coverage of secondary preventive services in a novel, expanded HDHP. The first stage evaluated the resultant effect the change in plan design on utilization and premiums; the second estimated the potential uptake of the expanded HDHP in commercial markets.

**I. IMPACT OF DEDUCTIBLE CHANGES ON UTILIZATION AND PREMIUMS:**

a) Baseline utilization and spending patterns for patients in HDHP plans were determined based on in-network deductible spending for enrollees who had total medical expenditures exceeding a certain threshold ($2,500) in a given calendar year. The distribution of deductible spending was then matched to the yearly IRS definition of a qualified health plan that sets the minimum individual and family deductible needed for a plan to qualify as a HDHP.
b) Estimating utilization and spending in HSA-HDHP that includes secondary prevention assumed that the expanded plan’s covered benefits remain the same except for the specified high-value preventive services that are now covered before the deductible. Reducing the amount a consumer spends out-of-pocket impacts aggregate spending (and thus premiums) in several ways:

1. **Shift Effect**: The insurer incurs any cost that the consumer no longer pays since the overall price of the service is unchanged. This is a shift in cost from the patient to the insurer. We calculate this shift in the first stage of the analysis by shifting all out-of-pocket expenditure on the selected services to the plan, holding utilization and total expenditure the same.

2. **Utilization Effect**: A change in spending occurs because a decrease in out-of-pocket spending increases the utilization of the drug or service. The amount of this change in consumption is relative to the price-elasticity of demand (percent change in utilization / percent change in price) of a given service. Elasticity estimates from the seminal RAND Health Insurance Experiment - the only randomized trial to measure the impact of out-of-pocket costs on the use of medical care – was used.\(^{xxv}\)

3. **Offset Effect**: There is now relevantly robust evidence that increased consumption of medications and high-value secondary preventive services will result in some reduction in other medical expenditures such as hospitalizations. In 2012 the Congressional Budget Office (CBO) started allowing an increase in prescription drug use to be somewhat offset by a decrease in medical expenditure when scoring legislation.\(^{xxvi}\) Calculating the precise offset for each of the selected drugs and services was out of the scope of this work. Our base case estimates on spending assume no offset. A sensitivity analysis assumed offsets similar to what the CBO allows (assuming a 1/5th of 1 percent decrease in medical spending for every 1 percent increase in prescriptions filled); a similar magnitude of offset was also assumed for non-drug services. It is worth noting that the conservative CBO methodology may significantly underestimate the offset from these secondary preventive services that were selected because of their value.

4. **Selection Effect**: Increasing the benefit generosity of a plan can also change expenditure and premiums because more generous plans will attract patients who are more likely to incur higher costs than those covered in a less-generous plan. This “selection” impact is incorporated in the modeling section of the analysis.

c) The change in premium was calculated assuming that the population enrolled in the specific HDHP remains constant. This is equivalent to assuming a captive population similar to an employer fully replacing their current HDHP with this novel product. Generally, an insurance premium is a function of total medical and drug expenditure paid by the health plan and a loading factor that includes administration, marketing, and other non-care related expenditure. Since MarketScan does not contain information about a plan-loading factor, it was assumed to remain proportional to the overall premium. Actuarial value was estimated as the percent of medical and drug spending paid by the health plan.
II. POTENTIAL UPTAKE OF THE EXPANDED HDHP IN COMMERCIAL MARKETS

The ARCOLA micro-simulation model was used to forecast the movement of individuals across different types of health plans (e.g., PPO, HDHP, uninsured) as the premiums and generosity of plans 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.

ARCOLA was developed originally under contract from Department of Health and Human Services and designed specifically to gauge the effect of CDHP demand in different health reform scenarios. The methods and results of the model have been published in the peer-reviewed literature for nearly a decade. xxvii, xxviii

The ARCOLA micro-simulation contains an array of health plans commonly available including HMOs and four Preferred Provider Organizations (PPOs) that correspond to the ACA metallic categories (i.e., platinum, gold, silver, bronze). In the bronze categories, a narrow network PPO and a HDHP are included. All of these choices are available in the individual as well as the employer-sponsored health insurance market with the addition of a HRA design.

To create the expanded HDHP in the simulation model, the incremental generosity of the novel plan needed to be accounted for. 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 micro-simulation. xxix

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 of the uninsured. For the micro-simulations, populations with statistic weights for individuals to generalize to the United States are deployed including state-specific differences in Affordable Care Act (ACA) adoption due to Medicaid expansion becoming a state decision following the 2012 Supreme Court case regarding the ACA. xxx

RESULTS:

I. IMPACT OF DEDUCTIBLE CHANGES ON UTILIZATION AND PREMIUMS:

1.05 million eligible enrollees were identified in MarketScan (i.e. data for a full year) and enrolled in HDHPs in 2011. The actuarial value of baseline HDHP plans was 71.7%. The selected secondary preventive services accounted for 6.1% of spending in currently available HDHPs, which constituted a $321 per member per month (PMPM) expenditure. The total and out-of-pocket spending for each of the targeted services is presented in Table 2.
Table 2. Spending on Targeted Preventive Services

<table>
<thead>
<tr>
<th>Service</th>
<th>Spending ($ Thousands)</th>
<th>Copay ($ Thousands)</th>
<th>Percent OOP</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE Inhibitors</td>
<td>$589,769</td>
<td>$214,621</td>
<td>36%</td>
</tr>
<tr>
<td>Anti-resorptive Therapy</td>
<td>$230,400</td>
<td>$90,537</td>
<td>39%</td>
</tr>
<tr>
<td>Beta Blockers</td>
<td>$171,807</td>
<td>$62,247</td>
<td>36%</td>
</tr>
<tr>
<td>Blood Pressure Monitor</td>
<td>$369</td>
<td>$89</td>
<td>24%</td>
</tr>
<tr>
<td>Inhaled Corticosteroids</td>
<td>$17,432</td>
<td>$8,593</td>
<td>49%</td>
</tr>
<tr>
<td>Glucose Lowering Agents</td>
<td>$944,697</td>
<td>$199,599</td>
<td>21%</td>
</tr>
<tr>
<td>Retinopathy Screening</td>
<td>$207,430</td>
<td>$88,566</td>
<td>43%</td>
</tr>
<tr>
<td>Peak Flow Meter</td>
<td>$169</td>
<td>$54</td>
<td>32%</td>
</tr>
<tr>
<td>Glucometer</td>
<td>$19,330</td>
<td>$4,882</td>
<td>25%</td>
</tr>
<tr>
<td>Hemoglobin A1c Lab</td>
<td>$369,662</td>
<td>$99,682</td>
<td>27%</td>
</tr>
<tr>
<td>INR Lab</td>
<td>$5,129</td>
<td>$943</td>
<td>18%</td>
</tr>
<tr>
<td>LDL Lab</td>
<td>$6,452</td>
<td>$2,635</td>
<td>41%</td>
</tr>
<tr>
<td>SSRIs</td>
<td>$18,812</td>
<td>$9,604</td>
<td>51%</td>
</tr>
<tr>
<td>Statins</td>
<td>$878,337</td>
<td>$297,595</td>
<td>34%</td>
</tr>
</tbody>
</table>

Expanding coverage for the targeted services led to a 5.63% increase in premium (assuming no offset). 2.66% of the premium increase was due to the shift of payments from patients to the health plan, and 2.97% of the increase in premium was due to the increased utilization of services. An analysis using the CBO offset estimate resulted in a slightly lower premium increase of 5.08%.

Table 3. Change in PMPM Premiums from Baseline HDHP

<table>
<thead>
<tr>
<th></th>
<th>Assuming No Offset</th>
<th>Assuming Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMPM Premium, Baseline HDHP</td>
<td>$320.72</td>
<td>$320.72</td>
</tr>
<tr>
<td>Percent Change Due to Shift</td>
<td>2.66%</td>
<td>2.66%</td>
</tr>
<tr>
<td>Percent Change Due to Elasticity</td>
<td>2.97%</td>
<td>2.97%</td>
</tr>
<tr>
<td>Percent Change Due to Offset</td>
<td>0%</td>
<td>-0.56%</td>
</tr>
<tr>
<td>Total Percent Change</td>
<td>5.63%</td>
<td>5.08%</td>
</tr>
<tr>
<td>PMPM Premium, Novel HDHP</td>
<td>$338.78</td>
<td>$337.00</td>
</tr>
</tbody>
</table>

The actuarial value of the novel HDHP rose to 74.18% when assuming no offset and to 74.20% when the offset was included (Table 4).

Table 4. Impact of Coverage on Actuarial Value

<table>
<thead>
<tr>
<th></th>
<th>Baseline HDHP</th>
<th>Novo HDHP, No Offset</th>
<th>Novo HDHP Offset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan Spending PMPM</td>
<td>$320.72</td>
<td>$338.78</td>
<td>$337.00</td>
</tr>
<tr>
<td>Out-of-Pocket PMPM</td>
<td>$126.42</td>
<td>$117.89</td>
<td>$117.19</td>
</tr>
<tr>
<td>Actuarial Value (%)</td>
<td>71.72%</td>
<td>74.18%</td>
<td>74.20%</td>
</tr>
</tbody>
</table>
II. POTENTIAL UPTAKE OF THE EXPANDED HDHP IN COMMERCIAL MARKETS

**Individual Market**

The ARCOLA simulation estimated that the introduction of the novel HDHP plan will lead to overall increase in insurance coverage in the individual insurance market (Figure 1). If the expanded HDHP plan was introduced in 2014 among all the other competing plan choices, it would be in high demand for over 5.5 million individuals. When examined over time, the new HDHP remains the fastest growing plan design until 2018 at which point, premium price for the current HDHP is sufficiently less expensive than the expanded HDHP. The simulation estimates that both HDHP and expanded HDHP enjoy considerable growth over the 2014 to 2023 period compared to PPO in the individual insurance market. Several sensitivity analyses revealed the both the chronically ill and less so those without chronic illness responded positively to the new HDHP choice.

![Figure 1. Forecast of Insurance Uptake Change by Plan Type (millions) in the Individual Insurance Market](image-url)
Employer-sponsored Market

Figure 2 demonstrates the substantial potential impact of introducing the expanded HDHP into the employer-sponsored health insurance market. The ARCOLA model projects, that if the novel plan was introduced in 2014, the expanded HDHP would be very popular in this market. However, it would be a significant substitute for existing HRA plans. This trend persists until 2023. The only significant change is that the expanded HDHP becomes more popular than the current HDHP over time.

When the ARCOLA model allowed employees to buy the expanded HDHP in exchanges, there is the potential for high demand, mostly from the existing employer sponsored PPO market. Of a roughly 160 million covered life employer market, approximately 40 million at the maximum may find the novel HDHP attractive, particularly if income-based cost-sharing reductions and premium credits are combined with the lower price point of expanded HDHP which has more generous benefits.
LIMITATIONS:

This research faces several important limitations. These analyses do not directly account for the impact of a health savings account (HSA) on the use of services either in the baseline or in the hypothetical new plan offering. The influence of a HSA, especially one seeded by an employer, was beyond the scope of this work. This might have the effect of reducing the utilization effect and therefore reducing the premium increase, but also reducing the increase in actuarial value of the novel plan.

Importantly, the estimates presented are based only on the impact of enhanced coverage of selected high value secondary preventive services. The analysis did not examine benefit design or care-coordination mechanisms such as implementing disease management programs.

SUMMARY OF QUANTITATIVE RESULTS:

- Targeted secondary prevention services represent ~6% of total spending in existing HDHPs;
- The novel expanded HDHP plan would necessitate an estimated 5-6% increase in premiums. Approximately half of the added spending resulted from increases in plan costs shifted from existing users of targeted services, and half resulted from increased utilization by new users;
- Expanded HDHP results in a slight increase in actuarial value
- Introduction of expanded HDHP leads to significant HDHP growth in commercial markets
Qualitative Interviews

STAKEHOLDER CONVERSATIONS ABOUT HEALTH SAVINGS ACCOUNT-ELIGIBLE HIGH DEDUCTIBLE HEALTH PLANS

To expand the health care research lexicon on HDHPs, the University of Michigan Center for Value-Based Insurance Design completed a series of qualitative interviews with an array of health care stakeholders in the employer and insurance market to discuss the benefits and deficits of existing HSA-eligible HDHPs as well as how the creation of a value-based HDHP plan that included first-dollar coverage of chronic disease services might impact premiums, chronic disease management and plan uptake. The Center sought the perspective of insurance plan designers, employers who offer HSA-eligible HDHPs as “full replacement plans,” employers who offer the HSA-eligible HDHPs alongside more traditional plans, and employers who did not offer an HSA-eligible HDHPs and did not intend to in the immediate future. The interviews focused on implementation successes and challenges that HSA-eligible HDHPs might pose to employers and consumers, as well as which categories of preventive services were currently covered prior to satisfaction of the deductible. Respondents were also asked to identify what specific medical goods and services might be covered in a hypothetical new plan that offered secondary and tertiary preventive services for chronic disease management prior to satisfaction of the deductible.

The breakout of respondents included:

- Three representatives from managed health care organizations that offer HSA- and HRA-eligible HDHPs in addition to other forms of coverage for over 37.6 million lives on the individual, small and large group market;
- Three large, for-profit organizations with over 100,000 domestic and international employees and retirees who currently do not offer an HDHP;
- One for-profit employer organization that offered full replacement HSA-eligible HDHP to all salaried employees totaling approximately 17,000 employees;
- One health system employer with over 20,000 employees that recently began offering an HSA-eligible HDHP;
- One medical provider corporate consultant;
- One labor-based employer offering full replacement HSA-eligible HDHP to non-negotiated non-unionized management of approximately 1500 employees;
- Three large employers totaling over 200,000 employees who offer HSA-eligible HDHPs alongside other plans.
KEY TAKEAWAYS

The combination of the rapidly increasing uptake of HDHPs and the growing prevalence of chronic disease in the U.S. suggest that rendering these plans more effective tools for disease management is a worthwhile endeavor. Participants in the interviews confirmed that HDHPs in their current form are not ideal products for those with chronic illnesses and offered worthwhile suggestions on how that might be changed.

- There is a need to evaluate the effect these plans have on users’ health behavior and overall health care costs as there is some evidence that higher consumer cost sharing before the deductible may lead some to avoid obtaining both necessary and unnecessary care.
- Avoidance of routine and preventive health care, particularly pertaining to chronic disease management, results in more costly complications and poor health outcomes.

Participants offered diverse perspectives in their discussion of HSA-eligible HDHPs, producing a series of supplemental considerations regarding plan benefits, insufficiencies and possible improvements.

- Respondents noted that HDHPs have the potential to raise consumer responsibility and participation in their health care utilization; however, they also noted that without proper education and communication measures prior to implementation, these plans may result in decreased utilization of necessary treatment, including chronic disease services, as a measure to avoid out-of-pocket costs.
- Participants also recognized that the plans in their current form may not meet the needs of select populations including those living with multiple conditions, older populations, those who must manage non-generic prescription drug costs and those of lower socio-economic status.
- Respondents indicated that some of these concerns can be overcome through the utilization of a variety of consumer education and communication tools, combined with seed money to offset the deductible and greater employer engagement.

Participants offered measured insights regarding federal regulations that currently define primary preventive services and therefore structure first-dollar coverage requirements prior to satisfaction of the deductible.

- Some respondents felt that primary preventive services—services classified as “A” or “B” grade services by the United States Preventive Services Task Force—were adequate to cover at no-cost prior to satisfaction of the deductible, stating that the intent of offering an HDHP was to provide essential service coverage while encouraging consumers to participate in their own care to meet the deductible.
• Others felt that expanding primary prevention first-dollar coverage to include low-cost disease management strategies (so-called “secondary preventive benefits”) would be financially and ethically appropriate to encourage those living with chronic disease to seek and access care. However, current federal regulations and a lack of recommendations similar to primary prevention guidelines made the process difficult.

• Additional respondents voiced that increasing access to disease management strategies prior to the deductible might be responsible health stewardship, however, these coverage decisions must be evidence-based, consistently coded by providers, better aligned with current reform efforts including wellness initiatives, and offered by high-performing providers and facilities.

While respondents were interested in exploring ways to reduce the costs of their health care coverage and promote employee engagement, they expressed ambiguity as to whether HSA-eligible HDHPs are the right tool to address chronic disease care and management, even with the option to include secondary and tertiary services as first-dollar covered services.

Additional examination is necessary to explore how these plan designs and saving options impact how employers and consumers—particularly consumers living with or diagnosed with a chronic condition—comprehend, utilize, and pay for care.
Possible Solutions

Using the current, narrow definition of prevention in the IRS guidance, HDHPs are limited in their ability to effectively manage chronic conditions. A possible solution is to update the definition of prevention under the guidance to reflect the clinical notion that prevention includes not just primary prevention, but also secondary prevention of chronic disease. Updating the guidance to allow coverage of secondary preventive services would encourage better health and more efficient healthcare spending. Broadening the existing safe harbor would allow HDHPs to provide coverage for selected evidence-based clinical services that prevent the progression of, or complications from, chronic disease without a deductible or with a deductible below the annual minimum.

One suggestion is to amend IRS guidance to include this sentence:

The preventive care safe harbor under section 223(c) (2) (C) may include any service or benefit, including drugs and medications, intended to prevent chronic disease progression or complications.

An important distinction is that this recommendation would allow but not mandate that HDHPs cover, wholly or in part, secondary preventive services before the deductible, giving plans the flexibility to cover or not cover secondary preventive services and products.

It is important to recognize the difference between this potential update and previous efforts to extend coverage to certain types of preventive services. Within the Patient Protection and Affordable Care Act, for example, coverage of certain primary preventive services is mandated for all new plans without patient cost sharing.

In contrast, the suggestion to update the definition of prevention would encourage purchasers to alter their plans as much or as little as they see fit within existing laws. The update would offer plans the flexibility to change, but not the requirement that they do so. The implementation of this update could vary widely depending on the preferences of the individual purchaser.

The proposed, updated definition permits HDHPs to better serve beneficiaries, particularly Americans diagnosed with chronic disease. Expanding the definition of prevention to include services that prevent chronic disease progression and related complications would enhance the ability of HDHPs to improve clinical outcomes while preserving the well-documented capacity to engage consumers and contain costs.
Conclusion

Updating the existing definition of prevention to include services used in the management of chronic disease allows for better health outcomes and more efficient spending of health care dollars. Utilizing the well-accepted and medically common definition of prevention that encompasses both primary and secondary preventive services would enhance HDHP attractiveness to potential purchasers and accelerate benefit design innovation. Amending the definition would ultimately allow health insurers to create products that better address the important goals of quality improvement and cost containment.
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