EBRI FAST Facts
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Using Health Plan Design to Incentivize Medication Adherence Among Diabetics: Impact on Employer and Patient Spending

Background

Value-based insurance design (V-BID) is a health plan feature that encourages optimal use of high-valued health care by lowering member out-of-pocket (OOP) costs through reductions in deductibles, coinsurance, or copays (Chernew, Rosen, and Fendrick 2007). Given that chronic disease progression, exacerbations, and adverse events are routinely controlled using medication, the application of V-BID in prescription drug coverage should make clinical and economic sense. In response to lower OOP costs, patients will likely increase their medication adherence, which will prompt medical cost savings —sometimes exceeding the additional pharmacy costs incurred (Agarwal, Gupta, and Fendrick 2018).

V-BID principles have been applied by health plan sponsors to some degree (Smith and Fendrick 2022) and have also made their way into federal law, most notably Section 2713 of the Patient Protection and Affordable Care Act (ACA) that requires all ACA Marketplace and non-grandfathered private health plans eliminate member cost sharing (i.e., without copayment or coinsurance, regardless of whether the deductible has been met) for specific preventive health care. The U.S. Department of Health and Human Services has estimated that in 2020, 151.6 million people had access to free preventive care under the ACA.[1] Moreover, in July 2019, the IRS issued guidance allowing health savings account (HSA)-eligible health plans the flexibility to cover some prescription drugs prior to members satisfying their deductibles.[2] Recently, the Inflation Reduction Act of 2022 incorporated V-BID elements, including a cap on cost sharing for insulin at $35 per month for diabetics covered by Medicare Part D and elimination of patient cost sharing for vaccinations covered by Medicare Part C. Despite the benefits, many employers and commercial insurers have not implemented V-BID, perhaps due to concerns about higher plan costs and premiums.

In addition to the federal requirement for cost sharing elimination for preventive health care services, the most common implementation of V-BID has been to improve access to, and affordability of, high-value services used to treat common chronic conditions such as diabetes. Although the impact of these programs on use of the targeted health services has been fairly well studied, less is known about how V-BID affects plan and member spending. Accordingly, in this *Fast Fact*, we estimate the average impact of reducing patient cost sharing for oral antidiabetic medications, comparing current average cost sharing for these drugs with that under three alternative plan design scenarios:

1) Replacing deductibles with 15 percent coinsurance.
2) Implementing a copay-only regime.
3) Making the medications free of all OOP costs.

[1] https://aspe.hhs.gov/sites/default/files/documents/786fa55a84e7e3833961933124d70dd2/preventive-services-ib-2022.pdf.

[2] https://www.irs.gov/pub/irs-drop/n-19-45.pdf.

Data and Methods

Using the Merative™ MarketScan® Commercial Database, we analyzed a random sample of 2.4 million individuals continuously enrolled during 2019 in a non-capitated private health plan (including employment-based and other commercial insurance). The cohort consisted of policyholders and their dependents under age 65, across all U.S. geographic regions, and in a variety of plan types (e.g., preferred provider organizations, health maintenance organizations, and high-deductible health plans). The prevalence of diabetes was 4.3 percent in the study sample.

Using pharmacy and medical claims, we calculated mean per-member-per year (PMPY) spending on inpatient, outpatient, and pharmacy health care. In addition to total spending, average employer spending and member out-of-pocket payments were derived. As a subset of overall pharmacy spending, oral antidiabetic medication costs were also measured.[3] We derived the proportion of days covered (PDC) for each medication utilizer and considered patients adherent if their PDC equaled or exceeded 0.80, a commonly used threshold for adherence (Roebuck, Liberman, Gemmill-Toyama, and Brennan 2011).

Next, we simulated three alternative cost-sharing arrangements for oral antidiabetic medication. First, we examined a scenario in which these drugs were afforded coverage prior to the deductible being met. For prescriptions with a positive dollar amount present in the deductible field, we readjudicated the claims-setting deductible to $0 and instead imposed a coinsurance rate of 15 percent — the overall average member cost share measured in the study sample. The second scenario replaced the existing member cost share with a flat copay of $3 for generics and $35 for brand names. These values closely resemble copay-only pharmacy benefit designs in states where they must be offered (e.g., Colorado and Montana). Note that we did not have information to further distinguish between preferred and non-preferred brands. The third alternative cost-sharing arrangement set all oral antidiabetic member OOP costs to $0. In all scenarios, plan paid amounts were increased to cover reductions in member OOP costs.

Patients facing the lower OOP costs under the three scenarios would likely respond with increased utilization of and adherence to oral antidiabetic drugs. To account for this, we assumed a 1 percent decrease in OOP costs would prompt a 0.23 increase in use (Goldman et al. 2004). We allocated the accompanying increase in pharmacy costs to the plan and member according to each cost-sharing scenario. We applied this assumption at the patient level and then remeasured PDC and the proportion adherent. Medication adherence in diabetes has been shown to lead to lower medical costs; therefore, for each newly adherent patient, we assumed a reduction of $3,126 in medical costs (Roebuck, Liberman, Gemmill-Toyama, and Brennan 2011).

After readjudicating the oral antidiabetic prescription drug claims for each of the three scenarios, we calculated the percentage differences in average member OOP cost, employer spending, and total cost between the status quo and each scenario. Finally, we conducted a sensitivity analysis of selected results by varying the OOP copay elasticity assumption from 0.05 to 0.40 and varying the medical cost offset assumption from $750 to $5,750.

Results

All three cost-sharing arrangements were estimated to have a near-zero impact on total costs, since spending would shift from patients to employers. Patients would see their OOP costs decline by between 1.6 percent and 16.1 percent, and employer spending would increase by between 0.03 percent to 0.30 percent. Changing the plan design from the status quo to 15 percent coinsurance would have the lowest impact on spending, while making all oral antidiabetic medications free to patients would have the largest impact. Findings from the sensitivity analysis suggest that even under the most aggressive scenario — $0 patient cost sharing for oral antidiabetic medications

[3] This category consisted of the following therapeutic classes: incretin mimetics, sodium-glucose cotransporter 2 inhibitors, biguanides, dipeptidyl peptidase 4 inhibitors, bile acid sequestrants, sulfonylureas, thiazolidinediones, meglitinides, and alpha-glucosidase inhibitors.

— with the most dramatic elasticity and medical–cost offset assumptions, employer spending would increase by 0.94 percent.

Percentage Change in Health Care Spending as a Result of Cost-Sharing Changes for Oral Antidiabetic Medications

	Impact on Total Spending	Impact on Employer Spending	Impact on Member Costs
Pre-Deductible Coverage (15% coinsurance)	0.00%	0.03%	-1.60%
Copays Only ($3 generics, $35 brand name)	0.02%	0.15%	-5.10%
$0 Cost Sharing	0.01%	0.30%	-16.10%

Discussion

It is now generally accepted that maintenance drugs for chronic health conditions help slow disease progression and lower rates of hospitalization and emergency department use (Roebuck, Liberman, Gemmill-Toyama, and Brennan 2011). In this study, we find that reducing cost sharing for oral antidiabetic medications would have a minimal impact on total drug and medical spending while disproportionately benefiting patients through reduced out-of-pocket costs and improved adherence. Specifically, the most aggressive scenario of making oral antidiabetic medication free of cost sharing for patients would lead to a very slight (0.30 percent) increase in total employer spending. At the same time, the enrollees using oral antidiabetic mediations would experience a substantial decrease in their individual out-of-pocket spending, presumably leading to better adherence improvements in glycemic control and reductions in diabetes-related complications and hospitalizations. As a result, encouraging medication adherence by lowering member out-of-pocket costs should not only improve patient health, but might also be economically efficient for sponsors.

These results are in line with prior EBRI research. In one study, we examined how removing cost sharing for 116 therapeutical drug classes in HSA-eligible health plans would affect premiums and found that premiums would increase by an estimated 1.3 to 4.7 percent (Fronstin, Roebuck, and Fendrick 2022). In another study, we examined how added cost sharing for preventive services would affect employer and enrollee spending and found that enrollees using preventive services may face a substantial increase in their individual out-of-pocket spending, while it would have a minimal impact on overall employer health care spending (Fronstin, Roebuck, and Fendrick 2023). Ultimately, this study and prior studies find that the overall impact of selectively reducing or eliminating prescription drug cost sharing on employer spending is low, with a negligible impact on overall spending due to expected offsetting by savings from reductions in hospitalizations and other medical costs.

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