Express Scripts
RESEARCH STUDY FINDINGS

Optimizing the Copayment Differential: Impact on Generic-Fill Rate

INTRODUCTION

Patient cost sharing is a way to sensitize members to the cost of their medications, and, when designed appropriately, cost-sharing structures can incent members to be prudent purchasers of their prescription medications. One way of doing this is through the use of tiered copayments that establish different costs for generics, preferred brands and non-preferred brands. To incent members to purchase lower-cost options, however, the difference in copayments should be set at a point that would financially motivate members to choose the lower- cost option. However, the question has remained: What is the optimal copayment differential that incents members to choose the lower-cost option and also promotes an equitable member share for both brands and generics? The purpose of this study was to explore the relationship between copayment differentials and patients' choice of generics.

METHODS

This study used a cross-sectional research design, with the unit of analysis at the group or benefit level (i.e., client). The data represented aggregated, retail-only prescription utilization for each client in 2004. This was matched to a group-characteristic file to bring in key plan-design and demographic variables in 2004. Clients included in the analysis offered integrated (mail and retail) pharmacy benefits within an employer-based market (i.e., no Medicare or Medicaid), did not change their copayment structure at any time during 2004 and offered a subsidized prescription benefit (i.e., no 100% copayments). The analysis was limited to those clients with an average generic copayment between $5 and $9. Holding the generic copayment constant allowed us to evaluate the independent effect of copayment differentials on the generic-fill rate (GFR).

Linear regression was used to evaluate the relationship between the GFR and copayment differential, controlling for client-level demographic and plan-design features, including average age, female percentage, implementation of step therapy, benefit type and geographic region. The GFR was calculated as the total number of generic, 30-day-equivalent claims divided by the total number of 30-day-equivalent claims in 2004. Benefit type was grouped into three-tier flat copayment, tiered coinsurance, non-tiered coinsurance and two-tier flat copayment. Geographic region was determined at the client level, using a U.S. Census classification. Clients were classified into a particular region based upon where the majority of members lived. If the client did not have a majority of members in one particular region, the client was classified as a national plan. Copayment differentials were measured as the difference between retail generic and preferred-brand copayments.

RESULTS

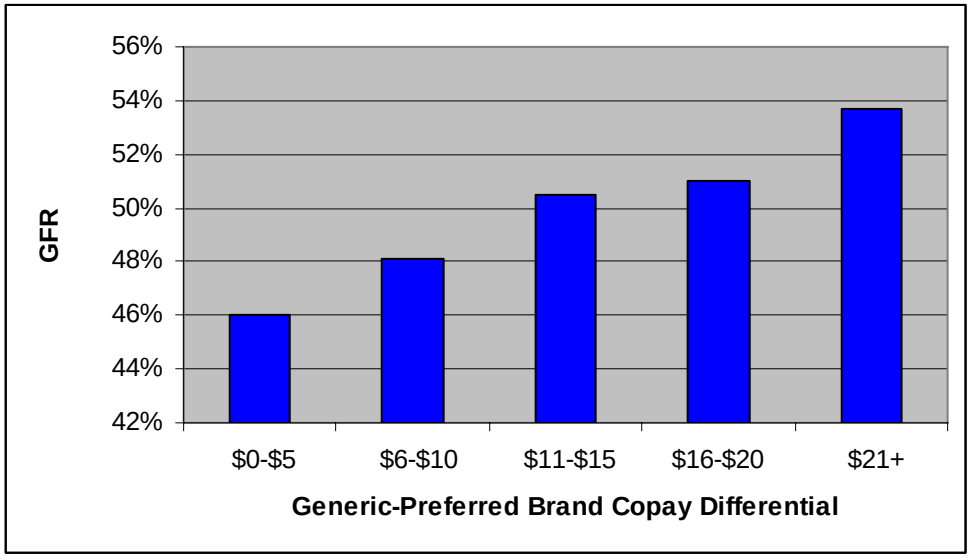
Table 1 profiles the client demographic and plan-design features. The unweighted average age across clients was 36 (SD=9.2), with a female population of 51%. Approximately 47% of clients in the GFR model had preferred brand- and generic-copayment differentials of $10 or less, and 7% of clients had differentials of $21 or more.

Generic-Fill Rate

The relationship between copayment differentials and GFR is presented graphically in the Figure below. The GFR exhibits a steady increase as the copayment differential increases. It is important to note that this increase is realized without a significant decrease in overall utilization. Results from linear regression analysis support these descriptive findings (Table 1). The generic and preferred-brand copayment differential had a positive and significant impact on GFR. Compared to clients with a $0 to $5 copayment differential, those with a $6-$10 differential increased their GFR by 1.5 percentage points. The marginal impact grew for those with a copayment differential between $11 and $15, where the marginal gain was 2.4 percentage points (3.9-1.5) compared to clients with a $6 to $10 differential. A decreasing margin of return was noted for the next-highest copayment-differential

group, $16 to $20, where the marginal gain was less than one percentage point (4.7-3.9). However, clients with copayment differentials of $21 or greater saw a marginal gain of 2.9 percentage points over the next-highest-copayment-differential group, and 7.6 percentage points higher than those with a copayment differential of $0 to $5. Other factors influencing GFR were adoption of step therapy, benefit design and geography. Clients with at least one step-therapy program in place in 2004 had, on average, a GFR 2.7 percentage points higher than clients with no step therapy. Clients with a three-tier benefit structure had a significantly higher GFR compared to two-tier flat and non-tiered coinsurance clients where the GFR was, on average, 2 percentage points lower than that of three-tier clients. Finally, compared to clients located in the Midwest, clients in the South had an average GFR 2.2 percentage points lower.

Figure: Generic Fill Rate by Copayment Differential for Clients With Average Generic Copayments Between $5 and $9 (n=1,543)



IMPLICATIONS

The findings of this study indicate that the larger the copayment differential, the greater the impact on GFR. For every $10 incremental difference in generic and preferred-brand copayments, clients may expect an increase in GFR of up to 3 to 4 percentage points. This supports the theory that, when designed appropriately, tiered copayment structures can incent members to choose lower-cost options. Also influencing GFR was whether or not the plan had implemented step therapy. Clients implementing at least one step-therapy program had, on average, a 2.7 percentage-point increase in their GFR. Programs such as step therapy that encourage first-line use of equally effective, lower-cost generics before stepping up to higher-cost, branded products have been shown to be one of the most effective tools in pharmacy-trend management. Three-tier plan designs appear to have a greater impact on moving GFR than non-tiered coinsurance or two-tier plan designs. These latter two plan designs may not provide a clear indication to members of lower-cost options and therefore are less effective at encouraging generic use.

Table 1: Plan Demographics and Benefit Design

Demographics	Generic-Fill Rate Model N=1,543	
Avg Age	35.6 (9.2)	
Percent Female	50.5	
	N	**%**
Step-Therapy Programs		
None	1,132	73.4%
1 or more	411	26.6%
Plan Type		
2-Tier Flat	496	32.1%
3-Tier Flat	679	44.0%
Non-tiered coinsurance	232	15.0%
Tiered coinsurance	136	8.8%
Preferred-Brand and Generic Copayment Differentials		
$0-$5	258	16.7%
$6-$10	479	31.0%
$11-$15	477	30.9%
$16-$20	220	14.3%
$21+	109	7.1%
Geographic Region		
Midwest	408	26.4%
West	154	10.0%
Northeast	500	32.4%
South	364	23.6%
National	117	7.6%

Table 2: Linear Regression Model Predicting Generic-Fill Rate

	Generic-Fill Rate N=1,543	
Independent variable	**Standardized Coefficients**	**p**
Intercept	58.632	
Age	-0.421	0.000
Age Squared	0.004	0.000
Percent Female	-0.042	0.057
# Step-Therapy Programs		
None	Reference	
1 or more	2.651	0.000
Benefit Type		
3-Tier	Reference	
2-Tier Flat	-1.959	0.000
Non-tiered Coinsurance	-2.111	0.000
Tiered Coinsurance	-0.974	0.109
Geographic Region		
Midwest	Reference	
West	1.949	0.001
Northeast	-0.667	0.101
South	-2.224	0.000
National	-0.945	0.137
Preferred-Brand and Generic Copayment Differentials		
$0-$5	Reference	
$6-$10	1.487	0.002
$11-$15	3.917	0.000
$16-$20	4.705	0.000
$21+	7.604	0.000
Adj R square		0.202

na = non-applicable