

# Consumer Attitudes and Factors Related to Prescription Switching Decisions in Multitier Copayment Drug Benefit Plans

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**Objectives:** To examine patient attitudes related to formulary medications and medication-related decision making in multitier copayment prescription drug plans.

**Study Design:** A cross-sectional retrospective analysis.

**Methods:** Data were collected via mail survey from a random sample of 25 008 members of a managed care organization. The selected members were enrolled in a variety of 2- and 3-tier copayment plans and were taking prescription medication to treat 1 or more of 5 chronic disease states.

**Results:** Most respondents did not believe that formulary drugs were safer or more effective than nonformulary drugs, but 39.7% thought that formulary drugs were relatively less expensive. Most respondents appeared willing to consider switching from a nonformulary drug to a formulary drug with a lower copayment. The percent of respondents who reported they would be very unlikely or unlikely to switch was only 15.3% for a new prescription and 24.2% for a refill prescription. Medication efficacy and physician opinion were important factors in plan members' switching decisions. Cost was an important factor for some members, but older plan members were less likely to report that cost was important.

**Conclusions:** Multitier plan members generally believed that drugs are placed on the formulary for reasons of cost rather than safety or efficacy. Most plan members were receptive to switching from a nonformulary to a formulary medication, but financial incentives alone may not convince some plan members to make the switch.

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Retail prescription drug expenditures in the United States have increased rapidly during the last several years, from \$78.9 billion in 1997 to \$154.5 billion in 2001.<sup>1</sup> Health plans have attempted to control prescription drug expenditures, increasingly by using multitier copayments. A growing trend is the use of 3-tier copayments; 63% of employer plans with copayments used a 3-tier benefit structure in 2003, an increase of 36 percentage points since 2000.<sup>2</sup> Past researchers have studied drug utilization under 3-tier copayments,<sup>3-5</sup> but research is lacking on consumer attitudes related to 3-tier copayments and other insurance benefit designs. In this study we gained insight into con-

sumer attitudes about formulary medications and decision making in multitier copayment prescription drug plans.

Although 3-tier copayments are structured a variety of ways, a typical structure has the lowest copayment for generic drugs, the middle copayment for brand name formulary drugs, and the highest copayment for nonformulary drugs. These 3-tier plans may decrease insurer costs directly, by shifting more prescription drug costs to plan members, and indirectly by providing financial incentives for members to choose generic drugs and formulary brand name drugs. Three-tier plans also provide more choice to the patients by providing them access to nonformulary drugs, albeit at a high copayment. It is hoped that the financial incentives make patients more selective in their use of prescription medications, but achieving this goal depends on a patient's willingness to respond to these incentives. Although the patient's physician also has an important role in the decision since he or she would need to approve a switch in medication, this study was framed in terms of the patient's willingness to accept a switch.

Three-tier plans result in 2 potential types of decisions for patients: (1) the choice between brand name drugs and generic drugs and (2) the choice between brand name formulary drugs and nonformulary drugs. Attitudes toward generic drugs and factors affecting patient willingness to use generic drugs have been studied previously,<sup>6-9</sup> but there is no comparable body of literature on the choice between formulary drugs and

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nonformulary drugs. It is possible that patients' attitudes about formulary drugs create a perception of risk in switching from a prescribed nonformulary drug to a formulary drug.

Pharmacy and therapeutics committees typically consider safety, efficacy, and cost in making formulary decisions,<sup>10</sup> but plan members may believe that the purpose of the formulary is solely to save the health plan money. A factor likely to affect patients' risk perceptions and switching behavior is whether the medication is a new prescription or a refill prescription. Patients who already are taking a nonformulary drug face potential switching costs, such as having to contact their physician, extra monitoring until they are stabilized on a new medication, and the risk of new side effects. Patients may be reluctant to undergo these switching costs, particularly if they are satisfied with their current medication. Even for a new medication, patients may perceive the formulary alternative to be less safe or effective than the medication they were originally prescribed. Thus, the perceived similarity of the original medication and formulary alternative in terms of safety and efficacy may play some role in formulary switching decisions.

Even patients who perceive some risk in switching from a prescribed nonformulary medication to a formulary alternative may be willing to make the switch. Past research on the use of generic medications has shown that patients are willing to accept some perceived risk to save money and that the level of savings required increases with the level of perceived risk.<sup>9</sup> This finding suggests that the amount of copayment differential would be an important factor in the switching decision.

In the literature on risk, the most relevant risk is known as handled risk, defined as the perceived risk after collection of information or other risk reduction processes used by the consumer.<sup>11</sup> Patients' initial perceptions of the risk associated with switching medications may diminish when reassured by a health professional that the switch is appropriate. As a result, physician and pharmacist opinions about the switch may be important factors in the switching decision. Familiarity with a product also may reduce handled risk; thus, patients may perceive less risk in switching if they have heard of the formulary alternative or the same manufacturer makes both the original and alternative products.

The objectives of this study were to examine health plan member perceptions of formulary prescription drugs compared with nonformulary prescription drugs and what factors were important in health plan members' willingness to switch from a nonformulary drug to an alternative formulary drug.

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## METHODS

The study was a cross-sectional, retrospective analysis of data collected by mail survey. Data were obtained from a random sample of 25 008 members of a large managed care organization in the Western United States. The study was approved by the University of Colorado Health Sciences Center's Institutional Review Board. The population consisted of individuals enrolled in a 2- or 3-tier copayment plan who had at least 2 prescription claims for medications used to treat 5 chronic disease states: arthritis, diabetes, dyslipidemia, gastrointestinal reflux disease, and hypertension. Individuals taking medication to treat a chronic disease were chosen to maximize the number of respondents who were likely to be faced with possible switching decisions. The selected members were enrolled in either a health maintenance organization (HMO), a preferred provider organization (PPO), or a Medicare + Choice plan. All Medicare + Choice members were subject to an annual \$1000 cap on their prescription drug benefits.

Two focus groups were conducted as part of the survey development process, and the results were used to develop a mail survey that was pilot tested on a sample of 300 individuals among the study population. The survey was revised based on responses to the pilot survey and the final 52-item survey was mailed out in November 2000. Reminder postcards were mailed out 2 weeks after the survey mailing. As part of the survey instructions, the terms "formulary" and "copayment" were defined.

Plan members' responses to switching between formulary and nonformulary prescription drugs were assessed using several different measures. First, they were asked to report whether they were ever told that a medication prescribed by their doctor was not on the health plan's formulary. Members who reported facing this situation were asked about their response. Next, plan members were asked to assume they were required to pay higher copayments for nonformulary prescriptions. Given this assumption, they were asked about the likelihood of switching from a nonformulary medication to a less expensive formulary medication for 2 scenarios: a new prescription and a prescription that they had been taking regularly. Likelihood was measured using a 5-point scale where 1 = very likely and 5 = very unlikely. Plan members also were asked to rate how important a list of 10 different factors would be in their decision about switching to a formulary medication. They rated each factor on a 7-point scale of not important to very important, and then had to select the most important, second most important, and third most important factors in their switching decision. Finally, they were asked to compare formulary and nonformulary medica-

tions for overall safety, effectiveness, side effects, and cost using a 5-point Likert scale of strongly agree to strongly disagree.

Paired *t* tests were used to examine the statistical significance of differences in the mean likelihood of switching to a less expensive formulary drug for new versus refill medications. Ordinary least squares (OLS) regression was used to model the likelihood of switching to a less expensive formulary medication. Ordinal regression models also were analyzed, but because the results were similar to the OLS models the OLS results were reported to facilitate interpretation. Separate OLS models were analyzed for the new medication and refill medication scenarios. Separate OLS analyses also were conducted for Medicare and non-Medicare respondents because the presence of the drug benefit cap for Medicare respondents might have altered their switch decision. The separate models also allowed plan structure (HMO or PPO) to be included as an independent variable for non-Medicare respondents. Age, income, sex, number of prescriptions per month, plan copayment type (2- or 3-tier), and attitudes toward formulary medications were the independent variables. Plan copayment type and plan structure were obtained from prescription records while all other variables were obtained from the survey.

Logistic regression was used to determine which respondents were more likely to report cost as an important factor. Cost was selected for further analysis because cost sharing increasingly is used as a way to manage the cost of prescription drug benefits and it is important to better understand what types of people are more likely to be responsive to cost incentives. The dependent variable was set equal to 1 if cost was chosen as either the first, second, or third most important factor in their decision. Age, income, sex, number of prescriptions and plan type (2- or 3-tier) were the independent variables. Age was categorized in this analysis to examine the effect of selected groups, eg, people aged 65 years and older.

The alpha value was set at .05 except in the case of groups of related variables. For the set of formulary attitude variables (ratings of safety, effectiveness, side effects, and cost) and the set of income variables, the alpha value was divided across the variables.

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**RESULTS**

From the 25 008 participants, 3816 usable surveys were received; review of the membership database revealed that all respondents were continuously enrolled during the year 2000. This resulted in a 15.2% usable response rate from all surveyed plan members and a 35.8% usable response rate from the continuous-

ly enrolled members (n = 10 663). The number of undeliverable surveys was unavailable; thus these response rates were underestimates of the true response rates.

Surveyed plan members were in a variety of 2- and 3-tier plans. The most common 2-tier structure was \$7/\$15 and the most common 3-tier structure was \$15/\$25/\$40. A comparison of survey respondents versus continuously enrolled nonrespondents is reported in **Table 1**. Respondents were significantly older than nonrespondents, were more likely to be enrolled in a 3-tier copayment plan, and more likely to be in a Medicare + Choice plan. Respondents had higher mean monthly prescription use than nonrespondents. Sex was not significantly different between groups.

**Plan Member Experience/Attitudes  
Toward Formulary Medications**

Plan members reported considerable experience with decision making about formulary versus nonformulary prescription drugs. Almost half of the respondents had been told that prescribed medication was not on the plan's formulary. When faced with this situation, 53.6% reported that they paid extra to purchase the nonformulary medication, 26.0% switched to a formulary medication, 13.0% did not get any medication, 9.9% received permission from the plan to stay on the nonformulary medication, and 7.4% did not respond (data not shown).

Most respondents expressed neutral opinions or disagreed with the statements about formulary drugs being safer and more effective than nonformulary drugs. Only 8.8% of respondents agreed (strongly agree or agree) with the statement that formulary drugs are safer than nonformulary drugs, 9.1% agreed that formulary drugs were more effective than nonformulary drugs, and 5.6% agreed that formulary drugs have fewer side effects than nonformulary drugs. However, 39.7% agreed that formulary drugs were less expensive than nonformulary drugs (data not shown).

**Willingness to Switch to a Formulary Medication**

The percentage of respondents reporting they would be likely or very likely to switch to a formulary medication was significantly higher for a new medication than for a refill medication, 64.3% versus 56.1%. Although this percentage is higher than the self-reported past switching behavior, people who are generally receptive to switching may not choose to switch in all circumstances.

Multivariate results of the models predicting the likelihood of non-Medicare respondents switching from a nonformulary medication to a less expensive formulary medication are provided in **Table 2**. For a new medica-

**Table 1.** Comparison of Respondents and Nonrespondents

Variable	Respondents (n = 3816)	Nonrespondents (n = 6847)	P*
<b>Copayment structure</b>			< .01
2-tier	2316 (60.7)	4779 (69.8)	
3-tier	1499 (39.3)	2068 (30.2)	
<b>Plan structure</b>			< .01
PPO	1325 (34.7)	3000 (43.8)	
HMO (non-Medicare)	1309 (34.3)	2670 (39.0)	
Medicare HMO	1152 (30.2)	1177 (17.2)	
<b>Sex</b>			.06
Female	1976 (51.8)	3396 (49.6)	
Male	1839 (48.2)	3451 (50.4)	
<b>Age, years, mean (SD)</b>	57.7 (13.2)	52.6 (14.7)	< .01
<b>Self-reported annual income</b>		NA	
< \$25,000	765 (22.8)		
\$25 000 to \$34 999	484 (14.4)		
\$35 000 to \$49 999	623 (18.6)		
\$50 000 to \$64 999	490 (14.6)		
≥ \$65 000	992 (29.6)		
<b>Self-reported health status</b>		NA	
Excellent	476 (13.2)		
Very good	1101 (30.5)		
Good	1365 (37.9)		
Fair	533 (14.8)		
Poor	131 (3.6)		
<b>Monthly prescription use, mean (SD)<sup>†</sup></b>	1.5 (1.2)	1.3 (1.2)	< .01

Values are n (%) unless otherwise indicated. Numbers for respondents do not sum to the total in all categories because of item nonresponse. Self-reported income and health status were obtained from the survey while all other variables were obtained from plan information.

\*The *P* values are based on chi-square test for independent proportions for categorical variables and a 2-sample median test for continuous variables.

<sup>†</sup>Calculated by averaging prescription utilization during the period June 1, 2000, to December 31, 2000.

HMO indicates health maintenance organization; PPO, preferred provider organization.

tion, individuals in a 3-tier plan were more willing to switch to a formulary medication than individuals in a 2-tier plan. With the alpha value of .05 divided among the 4 formulary attitude variables, the only significant attitude variable in the new prescription model was perceptions of the side effects of formulary medications. Individuals who thought formulary medications had fewer side effects than nonformulary medications were more likely to switch to formulary medications. In the refill model, individuals who thought formulary medications were safer than nonformulary medications were significantly more likely to report willingness to switch to formulary medications ( $P = .08$ ). No other variables

were significant in the refill model.

**Table 3** lists results from the OLS regression predicting the likelihood of Medicare respondents switching from a nonformulary drug to a less expensive formulary drug. Unlike the non-Medicare model, being in a 3-tier plan did not significantly affect the likelihood of switching for new medications. People who thought that formulary medications cost less than nonformulary medications were more willing to switch for both new and refill prescriptions.

The multivariate models in Tables 2 and 3 had very poor explanatory power but were significant overall (data not shown).

#### Factors Affecting the Formulary Switching Decision

The importance ratings for factors affecting members' decisions to switch to a less expensive formulary drug or pay more to stay on a nonformulary drug are listed in **Table 4**. When asked to pick the first, second, and third most important factors, the overwhelming choice of respondents was their doctor's opinion about switching. How well the new medication worked also was an important

factor, with 68.2% of respondents listing it among their 3 most important factors. What medical condition being treated was also chosen as an important factor, with 40.1% of respondents listing it among their 3 most important factors. Although only 4.5% of respondents listed how much extra they would have to pay as the most important factor, 29.5% listed it as one of the 3 most important factors. Although the importance ratings were very low for the factors "the same drug company makes both medications" and "heard of the new medication," interestingly, 6.8% and 11.6% of respondents, respectively, listed them as 1 of the 3 most important factors.



**Table 2.** Multivariate Analysis of Factors Affecting Formulary Switching Decisions: Non-Medicare Respondents

Variable	New Prescription			Refill Prescription		
	$\beta^*$	SE ( $\beta$ )	P	$\beta^*$	SE ( $\beta$ )	P
3-tier copayment structure	-.054	0.180	.017 <sup>z</sup>	-0.128	0.70	.068
Age <sup>†</sup>	0.008	0.027	.779	-0.029	0.029	.317
Income <sup>‡</sup>						
25 to 34,999	-0.152	0.095	.107	-0.001	0.103	.990
35 to 49,999	0.005	0.083	.949	-0.009	0.090	.920
50 to 64,999	0.089	0.086	.301	0.046	0.094	.627
≥ 65	0.113	0.074	.128	0.087	0.080	.282
Male	0.025	0.052	.623	-0.036	0.056	.524
Formulary safety <sup>§</sup>	0.007	0.059	.904	0.170	0.064	.008**
Formulary efficacy <sup>§</sup>	-0.105	0.064	.102	-0.110	0.070	.117
Formulary side effects <sup>§</sup>	0.163	0.064	.010**	0.057	0.069	.413
Formulary cost <sup>§</sup>	0.053	0.025	.034	0.049	0.027	.073
Number of Rx <sup>  </sup>	-0.020	0.010	.038	0.011	0.010	.306
HMO <sup>¶</sup>	0.089	0.053	.095	0.009	0.058	.883
Constant	1.861	0.180		2.083	0.195	

n = 2228 for new prescription model and 2231 for refill prescription model. Adjusted  $R_2 = 0.011$  for new prescriptions and 0.006 for refill prescriptions.

\*Coefficients from OLS regression models predicting likelihood of switching from a nonformulary to a formulary drug. Dependent variable: 1 = very likely to 5 = very unlikely.

†Omitted category is age 45 years or younger.

‡Household income in thousands of dollars. Omitted category is income < \$25 000.

§Level of agreement with statements about formulary drugs being safer, more effective, having fewer side effects, and costing less than nonformulary drugs. Scale: 1 = strongly agree to 5 = strongly disagree. The alpha value of .05 was divided among the 4 attitude variables; thus, significance for these 4 attitude variables:  $P < .0125$ .

||Self-reported number of household prescriptions.

¶Score 1 if member of an HMO plan and 0 if member of PPO plan.

<sup>z</sup>Significant at  $P < .05$ .

<sup>\*\*</sup>Significant at  $P < .0125$ .

SE indicates standard error of the mean; HMO, health maintenance organization; OLS, ordinary least squares; PPO, preferred provider organization; Rx, prescriptions.

In the multivariate results from the model predicting choosing cost as an important factor in the switching decision, plan copayment type approached significance, but did not reach significance at the  $P < .05$  level. Older respondents were significantly less likely than younger respondents to choose cost as one of the most important factors, and the effect was consistent across all age categories with the magnitude of the effect being the largest for the oldest age group. Respondents with household incomes of  $\geq \$65\ 000$  or more were significantly less likely than respondents with a household income of  $< \$25\ 000$  to choose cost as an important factor. Sex and number of prescriptions were not significant predictors. The full logistic regression results are available from the authors upon request.

## DISCUSSION

An important finding was the apparent willingness of most plan members to consider switching from a nonformulary drug to an alternative formulary drug. Not surprisingly, the results also showed that plan members were more willing to switch to a formulary drug for a new medication than they were for a refill medication. Thus, perhaps one way to increase formulary compliance is to target the initial prescribing decision so that plan members are not started on a nonformulary drug and then asked to make a switch. This finding also suggests that health plans should attempt to minimize changes in the formulary from year to year.

**Table 3.** Multivariate Analysis of Factors Affecting Formulary Switching Decisions: Medicare + Choice Respondents

Variable	New Prescription			Refill Prescription		
	$\beta^*$	SE ( $\beta$ )	P	$\beta^*$	SE ( $\beta$ )	P
3-tier copayment structure	-0.111	0.109	.306	-0.091	0.114	.423
Age <sup>†</sup>	0.023	0.108	.829	-0.095	-0.029	.415
Income <sup>‡</sup>						
25 to 34,999	0.029	0.117	.801	0.027	0.027	.198
35 to 49,999	-0.152	0.131	.246	0.027	0.138	.822
50 to 64,999	-0.037	0.167	.826	0.153	-0.018	.237
$\geq 65$	0.245	0.152	.108	-0.018	0.429	.007 <sup>‡</sup>
Male	-0.027	0.088	.755	-0.119	0.092	.198
Formulary safety <sup>§</sup>	0.048	0.085	.577	-0.027	0.090	.761
Formulary efficacy <sup>§</sup>	0.148	0.101	.145	0.035	0.106	.740
Formulary side effects <sup>§</sup>	-0.117	0.093	.208	0.122	0.097	.212
Formulary cost <sup>§</sup>	0.143	0.040	< .001 <sup>¶</sup>	0.150	0.041	< .001 <sup>¶</sup>
Number of Rx <sup>  </sup>	-0.008	0.016	.600	0.013	0.017	.422
Constant	1.559	0.586		1.996	0.631	

n = 830 for both models. Adjusted  $R^2 = 0.015$  for new prescriptions and 0.019 for refill prescriptions.

\*Coefficients from OLS regression models predicting likelihood of switching from a nonformulary to a formulary drug. Dependent variable: 1 = very likely to 5 = very unlikely.

<sup>†</sup>Omitted category is age 45 years or younger.

<sup>‡</sup>Household income in thousands of dollars. Omitted category is income < \$25 000.

<sup>§</sup>Level of agreement with statements about formulary drugs being safer, more effective, having fewer side effects, and costing less than nonformulary drugs. Scale: 1 = strongly agree to 5 = strongly disagree. The alpha value of .05 was divided among the 4 attitude variables; thus, significance for these 4 attitude variables:  $P < .0125$ .

<sup>||</sup>Self-reported number of household prescriptions.

<sup>¶</sup>Significant at  $P < .0125$ .

<sup>‡</sup>Significant at  $P < .05$ .

OLS indicates ordinary least squares; Rx, prescriptions.

There was some evidence that being in a 3-tier plan was effective in promoting formulary compliance for non-Medicare plan members. It is possible that individuals in 3-tier plans have more experience with making formulary switching decisions, and thus are more comfortable switching to formulary medications. They also may have been more cognizant of the financial incentives. However, plan copayment type was not a significant predictor of willingness to switch in the models for Medicare + Choice members.

The study results provide preliminary evidence of what factors are important to patients when they face formulary switching decisions. Physician opinion about making the switch was most frequently chosen as the most important factor. This finding is not surprising, but it does emphasize the need for plan members' physicians to support the formulary decisions made by the plan. The type of medical condition being treated

also was chosen as an important factor, a finding that is consistent with past research on willingness to take generic drugs that differed by the medical condition being treated.<sup>9</sup> Plans and physicians may need to provide additional reassurance to patients who are being asked to switch to formulary medications used to treat perceived high-risk medical conditions. Future research would be useful to determine whether different factors are important for different types of medications. For example, patients may rely more on their physician's opinion for medications used to treat asymptomatic conditions and more on perceived effectiveness for medications used to treat symptomatic conditions.

The extra cost members had to pay to stay on a nonformulary medication was rated as one of the most important factors for some individuals, but not for most plan members. Individuals with higher incomes were less likely to choose cost as an important factor, possi-

**Table 4.** Importance Ratings of Potential Factors Affecting Formulary Switching Decisions

Factor	Mean*	SD	Percent <sup>†</sup>		
			First	Second	Third
Whether new medication works as well.	6.45	1.06	21.0	22.7	24.5
Your doctor's opinion about switching.	6.09	1.31	50.0	15.3	9.5
What medical condition is being treated.	6.05	1.39	9.2	18.9	12.0
Whether new medication has same side effects.	5.98	1.41	2.1	8.7	16.7
How much extra you would have to pay.	5.39	1.63	4.5	9.6	15.4
How long you have been on your current medication.	5.34	1.69	2.9	5.1	5.5
Whether new medication has same dosing schedule.	4.93	1.96	1.7	3.5	4.1
Your pharmacist's opinion about switching.	4.87	1.87	2.1	11.3	5.6
Whether the same drug company makes both medications.	3.94	2.11	1.6	2.5	2.7
Whether you have heard of the new medication.	3.40	2.03	4.9	2.3	4.4

\*Measured on a 7-point scale where 1 = not important to 7 = very important.

<sup>†</sup>Percent of respondents listing each factor as the first, second, or third most important factor in their decision.

bly because the difference in copayments was not large enough to be financially significant. Cost also was less likely to be an important factor for older plan members. This finding suggests that increasing the copayment differential may not be effective in providing an incentive to switch for all plan members, particularly the elderly. Medicare + Choice plans may need to use educational interventions and target physicians' prescribing habits to increase formulary compliance rather than rely on patient financial incentives.

A result worth comment was the apparent lack of awareness among members of the process for selecting formulary drugs. Pharmacy and therapeutics committees almost universally consider safety and efficacy in selecting formulary products, but respondents seemed to perceive formularies as a way to control costs and not a way to improve the safety and efficacy of their prescription drug therapy. This finding suggests that managed care organizations need to educate their members about the process for placing drugs on the formulary. Even informing health plan members that medications sometimes are placed on the formulary because they are more cost-effective may be a good idea because people who thought that formulary drugs were less expensive than nonformulary drugs were more willing to switch to formulary medications.

A result that raises some concern was the 13% of respondents who reported that they did not obtain any medication after being told they would have to pay extra to get the nonformulary medication. Anecdotally,

2 focus group participants reported that when faced with a higher copayment for their nonformulary medications they initially switched to formulary alternatives, but then unbeknownst to their physicians, discontinued the formulary medication because of side effects.<sup>12</sup> This finding suggests a need for close monitoring and follow-up of patients whose medications are placed on nonformulary status because of the potential for adverse health consequences when a patient discontinues a medication.

**Limitations**

Limitations of this study were the low response rate and potential lack of generalizability to other health plans. Many of the plan members had faced a formulary/nonformulary switching decision and their reported willingness to make the switch may differ depending on their experiences with the plan's handling of past switching decisions. It is possible that plan members who had faced switching decisions were more likely to respond to the survey. It also is not known whether plan members who reported being willing to switch actually would switch if presented with the opportunity.

It is important to note that this study focused on the patient's willingness to switch to an alternative product. Actual switching behavior may differ when a physician needs to prescribe the alternative drug, because in some cases the physician may be reluctant to make the switch. This study also examined general switching from a nonformulary medication to a formulary med-

ication and thus no explicit differentiation was made between switching to a generic equivalent and switching to a therapeutic equivalent. It is possible that some respondents were referencing a specific type of switching when they responded to the survey items.

The poor goodness of fit for the multivariate models was another study limitation. Further research is needed to develop better predictive models of consumer switching decisions.

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**CONCLUSIONS**

Results of this study suggest that plan members are receptive to switching from nonformulary medications to comparable formulary medications, although financial incentives alone may not convince some plan members to make the switch. Cost was not one of the most important factors in most plan members' willingness to switch to a formulary medication; older adults in particular were less likely to rate cost as an important factor. Consequently, health plans may need to consider interventions other than simply increasing copayment levels to maximize use of formulary medications. It is possible that increasing copayment differentials might be more effective if combined with educational interventions. An example of this type of intervention is the member education letter currently used by the study health plan to inform plan members of the clinical significance when a formulary medication is changed. Because physician opinion is clearly important to patients, it is critical that physicians are supportive of the formulary decisions made by the plan. It is likely

that as prescription drug costs continue to rise, patients will be given even stronger financial incentives to choose low-cost drugs; thus it is important to continue monitoring how patients make decisions when faced with these financial incentives.

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