

Targeted Patient Education Effective in Switching Patients to Therapeutically Equivalent Generic Alternatives: Significantly Greater Impact in Home Delivery



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Introduction

Research conducted by Express Scripts found that increasing awareness of newly available therapeutically equivalent generic statin alternatives made available by the patent expiration of Zocor[®], was effective in moving patients to the new generic. The patent expiration of Ambien[®] (zolpidem) in April 2007 provided another opportunity to evaluate the impact of a targeted letter-based program. A mail campaign was designed to inform patients taking a branded hypnotic about the availability of zolpidem. This study was conducted to evaluate the success of this campaign.

Methods

The study used a quasi-experimental treatment and comparison group design, and analyses were conducted at the member level. The letter group was identified as members of plan sponsors who signed up to receive the zolpidem mailing and met the inclusion criteria. Controls were identified as members of plan sponsors who were not signed up to receive the zolpidem mailing and met the targeting criteria, but did not receive the mailing. Patients meeting the targeting criteria had at least one prescription for a branded hypnotic medication (Ambien CR[®], Sonata[®], Lunesta[®] or Rozerem[®]) in a 120-day pre-period, were 18 years or older, were continuously eligible for the entire study period, and were enrolled in a plan using the National Preferred Formulary with a flat three-tier copayment structure. Patients who had filled a prescription for generic Ambien (zolpidem) at any time after patent expiration and prior to the mail campaign were also excluded from this study. Patients were targeted for the mailing Aug. 15 to Aug. 17, 2007, and letters were sent Aug. 31, 2007.

Patients were followed for 180 days after the target index claim to determine switching behavior. The index claim was defined as the most recent claim for a branded hypnotic prior to the August target date. Outcomes were classified according to the formulary status and distribution channel of the index

claim. The outcome was defined in one of four ways:

1. No Fill: no subsequent claim for brand or generic hypnotics during the 180-day post-period
2. No Conversion: continuation on branded hypnotics during the post-period
3. Tried Generic: a claim for the generic hypnotic in the post-period before returning to a branded product
4. Conversion to Generic: claims for generic hypnotics for subsequent fills without claims for branded hypnotics in the post-period

Descriptive statistics were calculated to determine the distribution of demographic variables (age, gender and income measured at household ZIP code), distribution channel, and brand/generic copayment differential among the patients who received letters and controls. Bivariate analysis confirmed the statistical significance of differences between letter and comparison groups. Multivariate logistic regression was used to estimate the impact of the mail program on switching to a lower-cost alternative, while controlling for several independent variables. This analysis was conducted among those with a subsequent claim. Multivariate analyses were stratified by channel status.

Results

There were 81,480 unique members representing 1,180 clients in the study. After limiting the sample according to the inclusion and exclusion criteria listed above, 22,172 members remained. The sample was further limited to targeted members using a nonpreferred agent (all drugs but Rozerem[®] were nonformulary agents during targeting), leaving 20,056 members. In the final sample, 16,972 members were in the letter group and 3,084 were in the comparison group that did not receive letters. The distribution of demographics, baseline utilization characteristics and switching behavior are shown in Table 1. These data suggest that most index claims were filled through retail pharmacies. Comparisons between members

who did and did not receive letters also suggest members in the letter group were, on average, older, significantly less wealthy, and significantly more likely to be female. In addition, brand-to-generic copayment differentials were lower in the letter group than in the comparison group. The comparison of outcomes among members in the letter and comparison groups suggests that the proportion of patients without a subsequent claim for a brand or generic hypnotic in the post-period was roughly equal, and any difference was not statistically significant. However, patients in the letter group were significantly less likely to remain on brand hypnotics and were more likely to try generic hypnotics and to permanently switch to a generic hypnotic than were patients who did not receive the mailing.

The multivariate logistic regression results further indicated that patients taking nonpreferred agents who received the mailing (letter group) were significantly more likely to switch to a generic hypnotic than were patients who did not receive the mailing (Table 2). Among patients filling brand hypnotic prescriptions through a retail pharmacy, the odds of members in the letter group switching to generic zolpidem were 54% greater when compared to the group who did not get letters — even after adjusting for other demographic and benefit design factors previously shown to influence switching behavior (OR = 1.54; 95% Confidence Interval (CI) 1.31 to 1.80). This resulted in an estimated switching increase of 5.3 percentage points for those who received the targeted patient education.

The findings also indicate that increased copayment differentials are associated with an increased likelihood of switching (data not shown). Adjusted logistic regression analysis in patients taking a brand medication filled through home delivery suggested patients in the letter group were almost two times as likely to switch from a branded medication to the generic alternative (OR = 1.95; 95% CI 1.38 to 2.75). This translated into an estimated increase switch rate of 7.7 percentage points among those who received the targeted patient education.

Consistent with findings in the retail channel, the results suggest as the copayment differential increased, patients were more likely to switch to the generic medication. The greater success in home delivery is consistent with other findings around mail campaigns encouraging use of lower-cost alternatives.

Implications

Informing patients about lower-cost, equally effective alternatives influences movement over and above financial incentives to switch medications. Despite financial incentives and additional education, a large portion of patients remained on the branded medication. Further study into the various factors influencing patients' decisions may lead to increased success in future patient-education campaigns.



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Table 1. Distribution of Demographics, Utilization and Switching Behavior for Patients in Comparison Group and for Patients Who Received Letters

Variables	Categories	n=3084	Comparison Group	n=16972	Patients Who Received Letters
Gender*	% Male	1191	38.6%	6007	35.4%
	% Female	1893	61.4%	10965	64.6%
Age	Mean Age (\pm SD)		50.09 (\pm 13.24)		51.55 (\pm 13.01)
Income*	Mean Income ^a (\pm SD)*		\$51859.73 (\pm \$19428)		\$47734 (\pm \$17315)
Index Fill Channel*	Retail	2662	86.3%	14277	84.1%
	Mail	422	13.7%	2695	15.9%
Copayment Differential*	Retail Brand to Generic		\$30.79 (\pm \$8.17)		\$29.07 (\pm \$9.24)
	Mail Brand to Generic		\$20.39 (\pm \$8.58)		\$18.24 (\pm \$9.02)
Unadjusted Outcome*	No Refill	926	30.0%	5285	31.0%
	No Conversion	1853	60.1%	9255	54.5%
	Tried Generic	51	1.7%	380	2.1%
	Switch to Generic	254	8.2%	2052	12.1%

^a Median household income at ZIP code of residence, where it could be determined

* $p < .05$

Table 2. Logistic Regression Results Predicting Conversion to a Generic Hypnotic by Distribution Channel

Distribution Channel	Change in Adjusted* Conversion Rates Between Letter Group and Comparison Group (percentage points)	Adjusted * Odds Ratio	95% Confidence Interval
Retail	5.3	1.54	1.31 to 1.80
Home Delivery	7.7	1.95	1.38 to 2.75

*Adjusted for gender, age, income and copayment differential