Marketing activities within the pharmaceutical industry operate through various sales and promotional channels with the aim of convincing physicians, patients, and payers of the value and efficacy of products. A variety of marketing tools are used by pharmaceutical companies, including direct-to-consumer (patient; DTC) advertising, direct-to-physician (DTP) promotion through detailing and sampling by sales representatives, and advertising in medical journals. Meanwhile, the role of marketing promotion changes over the life cycle of a drug. Because a growing number of branded drugs have recently lost exclusivity, it is important to drug manufacturers to understand the impact of promotional activities on a mature drug category. In such a category, physicians and patients have had considerable experience with the drug and informative advertising has lost its relevance.

To determine the impact of DTP, DTC, and other marketing activities on a mature drug category in which generics have accrued a significant market share, inVentiv Health conducted research to quantitatively estimate the impact of pharmaceutical promotions on physician prescribing behavior for three different statin brands—Lipitor, Crestor, and Vytorin—after controlling for factors such as patient, physician and physician practice characteristics, generic pressure, et cetera. The research findings reveal that even though on average the marketing efforts affect the brand share positively, the magnitude of the effects is very brand specific.

A retrospective cohort study was performed using the unique panel data from physicians who participated in the Metropolitan Area Promotional Audit (MPA). MPA is a syndicated audit of inVentiv Health’s Campbell Alliance division with a large, dedicated panel of physicians representing 16 specialties who provide insight into pharmaceutical company promotional activities regionally across the United States. Panel physicians report on all pharmaceutical and healthcare company sales representative contacts during a pre-assigned work week each month.

In addition to MPA, the study used brand-specific, monthly spending data on DTC and professional journal advertising for the observational period as explanatory variables. Advertisements that promote specific drugs and those that focus on high cholesterol without naming a drug were combined in the analysis. Data on DTC advertising spending was obtained from TNS Media Intelligence, which is a provider of strategic advertising intelligence.

This is a summary of the article, “Asymmetric Responsiveness of Physician Prescription Behavior to Drug Promotion of Competitive Brands Within an Established Therapeutic Drug Class,” which appeared in the June 2011 issue of Health Marketing Quarterly.
Physician prescription behavior data for this study was obtained from the inVentiv Health computerized pharmacy prescription database of more than 22,000 retail pharmacy outlets. The data contains longitudinal prescription drug activity information for all prescriptions filled at these pharmacy outlets for each individual patient, regardless of the patient’s health insurance status.

To preserve causality of a drug promotion effect on physicians’ prescribing behavior (promotion should precede prescription), the total monthly number of new prescriptions (NRx) written by a physician for each statin under consideration were calculated for each month following an available month in the MPA dataset.

Statins are a typical class of drugs in that they share a similar mechanism of action and adverse effects profile. Using two years of monthly observations (January 2008–December 2009) from the unique representative panel data set, we examined the response to marketing promotion of physicians prescribing Lipitor, Crestor, and Vytorin. We explicitly accounted for competitive promotions, various physicians, practice settings, patient base, and market dynamic characteristics.

Our findings reveal that even though detailing, lunch and learns, and sample dispensing affect the brand share positively, the extent of the impact is very brand specific. Generally, each brand has its own trend, and because of this, the best choice of predictors for one brand could be suboptimal for another.

We also found that in cases when DTC (Lipitor and Crestor) and medical journal advertisings (Crestor) had a significant impact on physicians’ prescribing behavior, the impact had a nonlinear nature, exhibiting diminishing or even negative returns on each additional unit of investment.

The considerably smaller expenditures on medical journal advertising also appeared to have a larger overall effect on a brand’s market share compared with DTC advertising. This result supports a consensus in medical literature that DTC advertising influences sales at the therapeutic class level, rather than market share for individual drugs. This phenomenon also manifests itself in the case of Lipitor, which benefited from competitive DTC promotions.

We did not find any own-brand synergetic effect between different promotional modalities. However, we did find that competitive promotional DTP activities adversely affect physicians’ prescription behavior, having an especially big impact on a lower share brand (such as Vytorin).

Overall, these findings provide important insights into the competitive role of promotional activities within a well-established drug category. The results of the analysis can be used by drug manufacturers to optimize their return on investment via a more efficient allocation of their promotional mix.

The complete methodology of this research was detailed in the June 2011 issue of Health Marketing Quarterly. The full article can be downloaded from the link below or by scanning the QR code.


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