Impact of DTC Advertising Relative to Patient Compliance

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Executive Summary

It is widely believed that DTC advertising increases new diagnosis and treatment for advertised conditions, by providing consumers with information about conditions and treatment options.[1] A number of studies have also suggested that DTC advertising serves to increase compliance.[2]

This research was conducted to assess the new diagnosis and compliance impact of DTC advertising by tracking actual patient experiences through the RxRemedy patient panel.

Methodology (See Appendix for methodology details)

This analysis utilized RxRemedy's proprietary consumer longitudinal database of 25,000 monthly diary panel participants. Panel participants provide monthly reports on drug usage, doctor visits, etc. Analysis was conducted at the therapeutic category level across five major advertised conditions.

The analysis looked at three groups of people within each category, based on self-reported data by the panel respondents. These groups were defined as follows, based on questions panelists answer regarding each doctor visit:

- Panelist did not initiate a request, but instead let the doctor specify the drug[3]
- Panelist asked doctor for a specific drug, unprompted by advertising[4]
- Panelist asked doctor for a specific drug in reaction to an advertisement[5]

For this analysis "persistence" is defined as staying on therapy regardless of the drug that is being taken. If, for example, a patient switches from one medication to another, either because of their initiative or their doctor's initiative, in the middle of their therapy but continues to take their new medicine as prescribed they are defined as remaining persistent.[6]

Findings

Persistence curves were compiled for Patient Initiative and Advertising Effect based on the influence of advertising reported in association with: 1) Any purchase over the entire course of therapy and 2) The initial purchase of the therapy. (See Attachment I for base sizes for each cell in the analysis. No analysis was conducted using fewer than 100 respondents.)

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[1] See, for example, the annual *Prevention* study; DTC Monitor and Scott-Levin DTC Audit

[2] Sources: Prevention study; DTC Monitor and Scott-Levin DTC Audit. Various hypotheses exists for these compliance impacts: Patients who receive a prescription as a result of a DTC-driven request may be more committed to their therapy, and hence more motivated to comply; DTC advertising may serve as a reminder to take medications; and/or DTC advertising may serve to reassure patients about the safety of their medications.

[3] Referred to as "doctor chose" in the Findings section.

[4] Referred to as "patient asked without prompting from ad" in the Findings section.

[5] Referred to as "patients asked with prompting from ad" in Findings section.

[6] This is slightly different from a typical brand-based persistence analysis--where persistence ends as soon as a patient stops taking a specified drug (regardless of whether or not they switch to something in the same therapeutic class).

1. Results of Patient Initiative Over The Course of Therapy

This analysis clearly supports the contention that consumers who involve themselves in their healthcare by requesting prescription drugs are more likely to remain compliant with their therapy. Patients who requested and received a drug at any time during their therapy (be it the first prescription or any subsequent prescription) were more likely to remain on therapy than patients whose doctor dictated their therapy in each of the categories examined.

Further, it shows that this effect is especially applicable to patients who are motivated by advertising--consumers who reported that they requested a product because they were prompted by an ad were consistently the most compliant group analyzed.

% of Patients On Therapy After Six Months (6-Month Persistence)

	Patient Requests Over Entire Course of Therapy		
	Doctor Chose (No Requests)	Patient Asked Without Prompting from Ad	Patient Asked With Prompting from Ad
	A	B	C
	%	%	%
Allergy	21	34 A	44 A,B
Arthritis	32	43 A	56 A,B
Elevated Cholesterol	62	71 A	72 A
Depression	43	50 A	59 A,B
Diabetes	68	72 A	75 A

Significance Testing

A = Significant effect vs. "Doctor Chose" @ 95% level

B = Significant effect vs. "Asked Without Prompting by Ad" @ 95% level

2. Results of Patient Initiative on the Initial Prescription

The positive impact of patient initiated requests on compliance is also shown when the request came from the patient only at the time of their first prescription (e.g., initial diagnosis).

Patients who got on a drug because they requested it and made no subsequent requests were significantly more likely to remain compliant in three of the five categories examined.

Only the Allergy and Arthritis categories had a sufficient sample[7] of initial advertising-motivated requests to analyze. In both these categories, the overall conclusion was supported--consumers whose initial advertising-prompted drug requests were granted remained more persistent than other patients did.

% of Patients On Therapy After Six Months (6-Month Persistence)

	Patient Requests at Time of First Prescription		
	Doctor Chose (No Requests)	Patient Asked Without Prompting from Ad	Patient Asked With Prompting from Ad
	A	B	C
	%	%	%
Allergy	21	29 A	35 A,B
Arthritis	32	36 A	40 A,B
Elevated Cholesterol	62	68	N/A
Depression	43	47 A	N/A
Diabetes	68	67	N/A

Significance Testing

A = Significant effect vs. "Doctor Chose" @ 95% level

B = Significant effect vs. "Asked Without Prompting by Ad" @ 95% level

N/A = Not available due to insufficient sample size (Less than 100 patients)

Summary

Consumers who are prompted by advertising to be more involved in their healthcare (whether at their initial prescription or on subsequent office visits) are significantly more likely to remain persistent with their therapy than less involved consumers.

[7] Only categories with more than 100 patients making an advertising prompted initial request were analyzed.

Attachment I

Sample Sizes

The following tables detail the sample sizes for the analyses presented in the body of the report. No analysis was conducted with less than 100 respondents.

1. Results of Patient Initiative Over The Course of Therapy (Sample Sizes)

	Doctor Chose (No Request)	Patient Asked Without Prompting from Ad	Patient Asked With Prompting from Ad
Allergy	1445	680	310
Arthritis	1703	690	376
Elevated Cholesterol	2523	1313	223
Depression	839	636	138
Diabetes	1004	718	126

2. Results of Patient Initiative Over The Course of Therapy (Sample Sizes)

	Doctor Chose (No Request)	Patient Asked Without Prompting from Ad	Patient Asked With Prompting from Ad
Allergy	1445	584	224
Arthritis	1703	514	223
Elevated Cholesterol	2523	942	< 100 Patients
Depression	839	531	< 100 Patients
Diabetes	1004	526	< 100 Patients

Appendix

Methodology

The main objective of this project is to demonstrate that among people prescribed a medication, those who ask their doctor for a specific drug brand, because of seeing an ad (or personal referral), are more likely to persist with treatment than those who do not ask (leaving selection of therapy to the doctor's initiative).

This analysis utilized RxRemedy's proprietary consumer longitudinal database of 25,000 monthly diary panel participants. Five therapeutic categories will be investigated at as part of the research. These are:

- Nasal Allergies
- Arthritis
- Cholesterol
- Depression
- Diabetes

Pfizer provided Market Definitions for each of these categories. The refinement of the product-based Arthritis Market Definition explicitly restricts product use to the following (RxRemedy) condition categories: osteoarthritis, rheumatoid arthritis, gout-related arthritis, and other arthritic conditions, plus backache and disk disorders and bone, joint, and tendon problems.

The recall of Rezulin from the Oral Diabetic Market might distort purchase activity during the test period of 01Jan1999-31Dec2000; (its absence has, indeed, been filled by other products following its withdrawal from the market). Similar considerations hold for Seldane and Hismanal in the Allergy Market. These products have been removed from the respective market definitions.

Basic Analysis:

The key variable is the persistence or duration of use of a prescribed medication, which is summarized by a persistence curve, showing the successive probabilities of persistence beyond specified lengths of time (here, in 30-day months). Persistence curves will be generated for different analytic groups and contrasted between them. Analytic groups will be derived from Rx Remedy panelists who attribute their purchase of the medication to their own or their doctor's initiative:

- Diarist asked doctor for a specific drug in reaction to an Ad
- Diarist asked doctor for a specific drug, unprompted by advertising
- Diarist did not initiate a request, but let the Doctor specify the drug

These are based on self-reporting by the diarist.

Parallel analyses will be conducted considering, firstly, the diarist's role in the initiation of therapy (associated with the initial purchase of the episode) and, secondly, the diarist's role expressed in association with any (subsequent) purchase associated with the episode.

Measurement of Persistence:

To measure persistence, we have compiled Rx-episodes across the drugs comprising a therapeutic category (as defined by Pfizer). These episodes are based on continuous usage of any prescription therapy included in the Market Definition for the therapeutic category. Episode length will be computed as the total number of days covered by usage among any of the selected prescription drug products with no break in usage, augmented by the terminal amount purchased. A break in usage will be inferred whenever the amount (in days) of therapy purchased falls below half the length of the interval to the next purchase (compliance<50%).

Rx Remedy has learned from other similar analyses of persistence that the length of the maximal episode (among several successive episodes) is most representative of the total therapeutic history of the patient with that product or therapy. Therefore, persistence curves will be compiled from these maximal episodes.

Note that all salient attributes of an episode are compiled at the episode level and retained for analysis. These include starting date and duration of the episode, diarist demographics, and the diarist's role(s) in initiating and/or continuing therapy (including exposure to advertising).

Parallel persistence reports have been compiled for Advertising Effect based on the influence of advertising reported in association with:

1. any purchase comprising the episode (AdEver Effect on Persistence)
2. the initial purchase of the episode (AdFirst Effect on Persistence)