



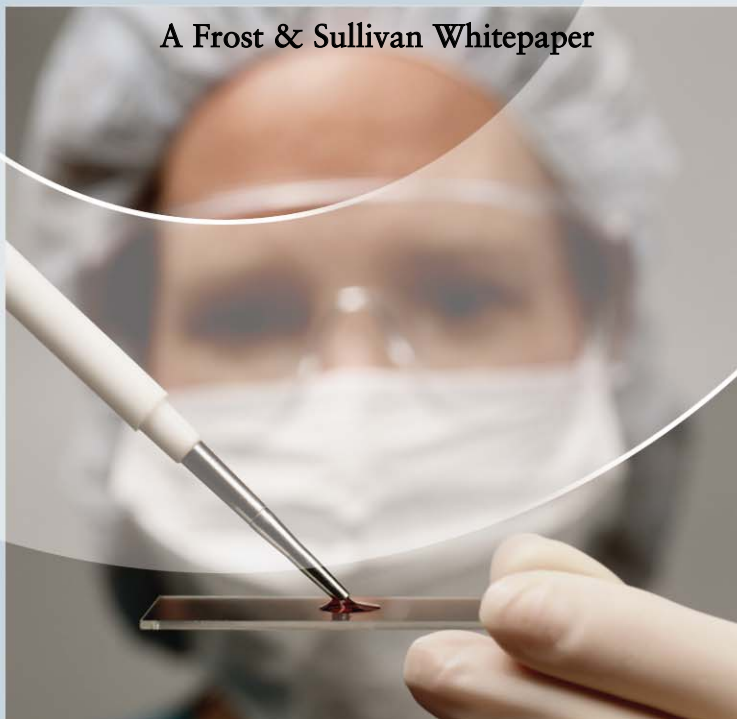
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THE EVOLUTION OF
PATIENT
ADHERENCE
PROGRAMS:
Moving from Mass
Market Relationships to
a Personal Approach



A Frost & Sullivan Whitepaper



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INTRODUCTION

Poor adherence to medications is a major problem and is estimated to cause approximately 125,000 deaths annually and account for 10 to 25 percent of hospital and nursing home admissions in the United States.¹ A new study has found that an average pharmaceutical brand loses 38% of its sales to non-adherence issues, and, according to industry estimates, it costs the pharmaceutical industry more than \$30 billion in lost revenues.² With such a well-identified and significant clinical and financial challenge, pharmaceutical manufacturers need to improve the approaches they use to improve patient adherence to their therapy. The potential for improving adherence is clear: improved outcomes and higher lifetime patient value. (For more information on the consequences and costs of non-adherence, refer to the Frost & Sullivan white paper in the series, *Patient Nonadherence: Tools for Combating Persistence and Compliance Issues.*)

The next generation of patient adherence programs will integrate financial incentives such as loyalty cards with electronic technology (such as refill reminders, e-mails, text messaging), behavioral science and other interventions to retain patients on a long-term basis. Adherence programs that are supported by an ongoing relationship with patients are more successful than one-time or even periodic outreach messages. Multi-faceted interventions that target specific barriers to adherence are effective because they address the real underlying problems and reinforce positive behaviors.³ Next-generation adherence programs will recognize that a single solution may not fit with every patient's needs or motivations. Rather, these programs will provide a viable platform that will bring multiple adherence initiatives under one roof to address common barriers.

Pharmaceutical companies have not fully embraced patient adherence improvement strategies or recognized the significant impact that these programs can have on the profitability of pharmaceutical brands. In the changing pharmaceutical environment, the focus is now shifting from patient acquisition to patient retention to drive lifetime patient value since it costs less to retain a patient than to acquire a new one. This trend has been fueled by the changing dynamics of the U.S. pharmaceutical industry where less time is now available to maximize revenues due to increasing generic threats, longer drug development times, increasing promotional costs, decreasing return on investment (ROI) and consumers becoming increasingly empowered to make informed decisions.

Consequently, brand managers are under intense pressure to get more from their existing assets and at the same time retain the loyalty of existing customers. Significant evidence is now emerging from industry case studies of the value these programs can have on adherence rates and on a product's bottom line. However, brand managers must prove the value of these initiatives to senior management to win over adequate resources to launch patient adherence and disease management programs. Some companies are now beginning to target non-adherence by closing the gap between prescribed therapy and actual patient behavior by making the leap from traditional adherence programs to truly next-generation strategies. There is an urgent need to recognize the fact that an entire patient population

cannot be addressed with a single set of adherence messages. As such, an individualized approach to creating consumer communications is more likely to yield results when there is an emphasis on a patient's individual barriers to compliance and persistency.³

TRADITIONAL ADHERENCE PROGRAMS

In a study by Harris Interactive, the top five reasons for patient non-adherence are patients' forgetting to take their medication, adverse side effects, financial cost, denial or disagreement that they need to take medication, and the accessibility or delivery of the medication. To date, the pharma industry has largely been using very simplistic and one-time interventions to address these factors. Simplifying dosage regimens and delivery is still the most common strategy for increasing adherence. Other strategies includes "welcome to therapy" letters after filling a prescription, tools to explain the use of and importance of the medication, mailing refill reminders, brochures, and telephoning. Some interventions such as pillboxes, alarms, and compliance packaging, which include blister cards with pill specific calendars, have also been used as part of adherence enhancing strategies.⁴

Most pharmaceutical companies have not fully appreciated how a targeted, customized, patient-centric relationship marketing program that provides targeted interventions is the best solution to address the multiple reasons for non-adherence. This type of program can range from point-of-sale loyalty cards to a comprehensive, multichannel relationship program that motivates and educates patients to stay on their prescription therapy. Other programs range from simple Web-based reminders to financial incentives and complete disease management programs. Yet, the industry has been slow to adopt these behavior-based marketing strategies and to recognize that a single solution approach may not fit every patient's needs and motivations.⁵

BASIC LOYALTY CARD PROGRAMS: FINANCIAL INCENTIVES AND ADHERENCE RATES

Pharmaceutical companies know that lowering co-payments is one of the fastest ways to improve adherence levels.⁶ Loyalty card programs that can be used to get point-of-sale discounts have now become a powerful tool for many brand managers. Based on the early success of basic loyalty card programs, brand managers are implementing more sophisticated, integrated and multichannel programs that will transform loyalty cards from mere transaction-based services into true patient-specific relationship marketing programs.

With these programs, brand managers receive new prescription information as well as longitudinal prescription data that can reveal treatment patterns under which a prescription is written. This can in turn allow managers to track the progression of the patient's therapy through time. With this added dimension comes the ability to better segment the market by finding clearer similarities in physician behaviors and patient types.

Using anonymous patient level (APL) or deidentified data, patient segmentation can be done based on a number of different factors including: age, gender, treatment/utilization, regimens, insurance status, indications/diagnosis, reimbursement, and annual income. These populations can be further segmented by source of business (new patient starts, restarts), therapy progression, payment and adherence.⁷ The addition of these patient characteristics to a market analysis reveals important behaviors and relationships that brand managers must understand to accurately identify brand related adherence issues and to devise the most effective adherence strategies. In addition, loyalty card programs provide patient-level prescription, pharmacy and physician data that can be combined with third-party data sources for a comprehensive analysis of adherence rates to target those patients who are not following their treatment regimens, thereby allowing pharmaceutical companies to maximize the effect of individualized messages and improve ROI for the adherence strategy employed.

Traditional adherence enhancing approaches, such as refill reminders, interactive response systems, E-mail, text messaging, and automated push-and-pull voice services can be delivered to specific patient types resulting in more timely and effective interventions. Some manufacturers have incorporated patient education on a credit-card-sized CD-ROM. The CD-ROM has interactive tools that educate patients about their disease state, the importance of taking their medication, the proper way to take their medication, how to minimize their side effects, and steps that should be taken to achieve a healthier lifestyle. These programs may also include nurse and pharmacist outreach programs, patient peer group support and family counseling.

The following case study illustrates the effectiveness of a loyalty card program that provided a financial discount at every fill to patients with a chronic condition.

Case Study I: Longitudinal Patient Data Analysis of the Loyalty Card Program

The manufacturer of a well-established drug used to treat a chronic condition was facing growing competition in the market. The company had an ongoing loyalty card (co-pay offset) program for the drug, and it wished to measure the effectiveness of the program by looking at the retention (persistence) of patients enrolled in it.

Solution

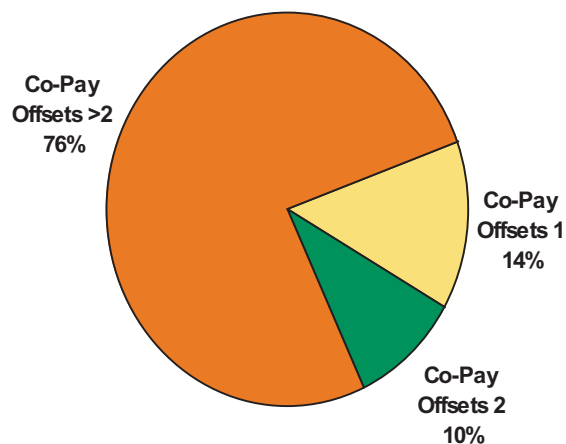
A database of approximately 6,000 consumers was developed that provided their information via the loyalty card enrollment. Consumers were de-identified and matched to longitudinal patient data (LPD) to determine the claims of consumers enrolled in the program versus a matched control group of patients who were not enrolled in the program.

Key Program Results

The loyalty card program provided the following results

- The right people (test patients) used the card
- 76% of test patients enrolled in the loyalty program used their cards on more than two occasions
- Overall, the loyalty program was successful in keeping patients on the drug.
- At the peak of the study, the persistency rate between the test and control patient groups was as high as 12% i.e. five times as many test patients used the program

Loyalty Card Use of Test Patients



Source: Verispan/McKesson

Interventions Addressing Attitudinal and Behavioral Barriers

Pharmaceutical companies have been slow to incorporate behavioral science techniques into the relationship marketing strategies they use with their patients, even though it is clear how improving patient adherence can have significant impact on the profitability of pharmaceutical brands. A major challenge pharmaceutical companies face is moving away from one-time interventions to improve adherence to long-term programs with consistent, on-going touchpoints with the patient. The shift must occur from looking just at discrete events (i.e. therapy initiation) to acknowledging and addressing the complex bundle of behaviors influencing an individual's barriers to compliance and persistency. The failure of traditional market segmentation to enhance patient adherence has encouraged researchers to create individually tailored messages to drive behavior change, and to tackle adherence issues for a variety of therapeutic regimens. The adherence improvement interventions that work best are those that include regular follow-ups with the patient. A number of studies have demonstrated that one-time interventions are not as successful as

multiple interventions. Multifaceted interventions that target barriers specific to a patient are effective because they address specific problems and reinforce positive behaviors.^{3,8,9} Consequently, pharmaceutical companies should help to incorporate patients into the decision-making process regarding their therapy and the goal should be to motivate patients to engage in a complex set of behaviors over a period of time. These behavior modifications should be focused specifically on the patient's particular condition and particular therapy.

The most compelling reason to invest in these tailored communications is to increase return on investment (ROI) by keeping patients on the therapy longer. Long-term and highly-specific behavior outcome goals should be set up for patients facing the prospect of making life style changes, and pharmaceutical companies should work toward these goals gradually. Marketers should tailor these changes to specific patient needs, while building the patient's confidence through small steps while at the same time implementing more intensive interventions.

The following case study illustrates the natural evolution of loyalty programs from a transaction-based approach to an adherence program focused on modifying patient behavior. It also illustrates how ROI can be maximized when loyalty card prescription claim data are matched to identify which interventions most affect patient behavior.

Case Study 2: Obesity Case Study

The manufacturer of an oral medication used in the management of obesity needed a re-launch program to overcome low adherence rates and slow physician uptake which were caused by the drug's serious side effects and poor reimbursement.

Solution

A customized patient care program was created integrating inbound and outbound contact center services, nurse support, fulfillment, reimbursement, a Patient Assistance Program (PAP) and data gathering services for patients, caregivers and clinicians. The company's contact center functioned as a single point-of-contact. The reimbursement team overcame significant hurdles by working with patients, physicians and healthcare plans to secure statements of medical necessity to ensure access to the drug. To maximize ROI, an enrollment questionnaire was used to stratify the patient population and target those segments with the highest potential with more intensive communication and support. The collected data was used to establish behavioral patterns and refine subsequent interactions. The manufacturer's DTC campaign was tied with enrollment packages, newsletters, and special promotions to educate patients and improve adherence.

Highly-trained customer service representatives (CSRs) explained program benefits, answered questions, captured patient information, processed enrollments and coordinated reimbursement. Clinicians, including registered nurses and dietitians, provided counseling to patients on medical and diet-related issues.

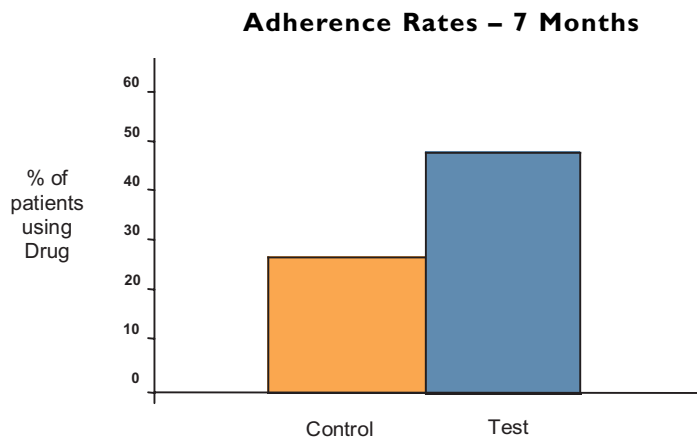
Key Program Results

The integrated solution helped the manufacturer to:

- Exceed adherence targets – over 42 percent of patients enrolled in the program were still using the drug at seven months
- Attain an ROI of approximately 300 percent (3:1)
- Measurably improve physician product adoption and utilization

Key Program Learnings

- DTC efforts drove patient demand and interest
- Patient out of pocket cost was the number one patient issue
- More frequent outbound calls improved patient adherence
- Without outbound intervention, patient drop off was most severe in the first 30 days (30%) and 50% of patients dropped off after 4 months
- Education and clinical support services were required to counsel patients on drug interactions but combining lifestyle/behavioral change was critical to program success
- Targeted interventions will mitigate costs and ensure the greatest program ROI



Source: Verispan/McKesson

CHOOSING A TARGETED VS. TAILORED SEGMENTATION APPROACH

Patient segmentation has emerged as a useful tool to identify patient segments with the greatest profit potential and the most room for growth. It is no longer adequate to simply classify patients by basic demographic variables such as age, gender, education, income, or geographical region. Messages framed in such a way will not reach the target audience if they do not address customer's interests, values, motives and opinions.

Targeted strategies use single intervention approaches for a defined population subgroup having similar characteristics. These subgroups may be very small, such as Hispanic women aged 50-60 with low rates of cervical cancer screening. A targeted strategy is based on the aggregate profile of a specific population subgroup and is one-dimensional. In contrast, tailored strategies refer to a process of creating individualized interventions. In the same subgroup, tailored messages may be based upon specific characteristics of individual women within the intervention population, such as their perceived benefits and risks associated with cancer screening, breast cancer risk, and specific barriers to screening. In this way a number of tailored messages can be created based upon unique characteristics.

A tailored approach is more likely to produce results when the goal is to motivate patients to engage in a complex set of behaviors over longer periods of time.¹⁰ Driving patients' adherence to medication requires an emphasis on the patient's individual barriers to compliance and persistency. The need for this tailored approach is critical for some chronic conditions such as asthma, hypertension, diabetes and osteoporosis that call for significant lifestyle changes, and have complex, long-term treatment regimens. This segmentation will also allow marketers to best allocate their resources to patient segments that will respond to a tailored approach most positively.

This technique is especially useful as pharmaceutical manufacturers continue to invest in programs targeted at specific ethnic populations.

MULTICULTURAL MARKETING AND ITS ROLE TO ENHANCE ADHERENCE

Ethnic consumer segments present a significant marketing opportunity for the pharmaceutical industry. According to a cohort study done to examine the relationship between race and achieving target LDL cholesterol goals among patients on statin therapy, it was found that African Americans were less adherent to therapy with only 50% of them achieving target LDL goals compared with 71% of Caucasians. Some of the factors cited for this include socioeconomic disparities and limited access to care, lack of personal awareness about cholesterol levels, treatment benefits and communication barriers with healthcare providers.

A study done to evaluate behavior around persistence and the lifetime value of Hispanic patients found persistence rates for Hispanic patients were 10% below that of non-Hispanic, white patients and that the life time value of those patients was lower. However, as pharmaceutical companies develop ways to improve adherence among Hispanics and other ethnic populations, their corresponding lifetime values are expected to increase.

While African Americans and Hispanics account for 14% and 12% of the total U.S. population, respectively, the total amount of money spent on direct to consumer (DTC) marketing targeting these populations represents only 0.5%, or \$21 million, of all DTC spending for prescription drugs. This is the case even when in 29 prescription markets,

the actual retail dollar market for African Americans and Hispanics is around \$14.5 billion and \$11.4 billion, respectively. When adjusted for population size and potential, these markets could be as high as \$20.9 billion for Hispanics and \$18.5 billion for African-Americans.¹¹

At this point, programs to improve adherence among specific racial and ethnic groups are in the early stages of implementation, and they are faced with challenges since evaluations and data are limited and information on non-financial causes for non-adherence is incomplete. Pharmaceutical companies have been slow to use segmentation strategies in these populations, due in part to the perception that little can be done to address adherence issues among these patients. Yet, manufacturers must commit to conducting longitudinal patient segmentation to identify the unique predictors of non-adherence and these barriers should be addressed by creating tailored messages for these consumers. With a rapidly changing patient population, the task before marketers goes beyond providing simply in-language materials to ensure adequate adherence and compliance. It is critical that manufacturers possess deep cultural insight into these patients and their perceptions about their disease and therapy.

CREATE A THERAPEUTIC ALLIANCE BETWEEN PHARMACEUTICAL MANUFACTURERS, PATIENTS AND PHYSICIANS

There is ample evidence to prove that medication adherence can be improved with earlier communication between physicians and patients. Barriers to medication usually occur early in the therapy and usually result from patient perspectives on the disease and related drug therapy. Establishing a successful adherence program early is important to maintaining long-term adherence. Studies have shown that although educational materials addressing preventive health behaviors are available for patients at physician offices, they are rarely used in a coordinated fashion with physician advice.³ A better approach would be to coordinate physician advice with educational information that is tailored to the specific needs of individual patients. Brand managers should promote the relationship between patients and physicians by providing patients with very specific information about their disease and its therapy.¹²

A number of randomized trials have shown the effectiveness of a tailored education compared with a “one size fits all” approach to help patients modify a range of health-related behaviors.³ Physicians should use multi-faceted behavior-modification therapies at the right stages of therapy to engage patients in decision-making and communication to improve adherence. Pharmaceutical manufacturers should collaborate with physicians to assess the patient’s understanding of their illness and recommended therapy, communicate the benefits of treatment, assess the patient’s readiness to carry out the plan, and discuss any barriers to adherence that patients have.

TACTICAL TIPS FOR YOUR NEXT-GENERATION ADHERENCE PROGRAM

Brand managers should realize the importance of developing messages and tools to meet the needs of different age groups and disease states when developing an adherence program. Some tips to keep in mind include:

- Understand your target population and disease state
- Understand that a disease-specific approach to addressing adherence is essential since the issues vary considerably across different diseases and treatments. For example, with certain conditions, such as psychiatric disorders, the condition itself plays an important role in adherence. On the other hand, with diseases such as diabetes and asthma, adherence requires a large degree of self-management.
- Deliver effective and targeted compliance messages that take into account patient behavior as well as demographics. Simple patient profiling and compliance messages based on demographics alone, current brand usage, and diagnosis will have a limited benefit since attitudinal and behavioral barriers vary widely among patients.
- Invest in patient education programs that emphasize the importance of the complete course of treatment and which encourage patient participation in the identification of treatment options, adverse effects, alternative treatment options and compliance management
- Create multi-channel programs that combine mail service, care and claim management and data tracking along with disease therapy management, to educate patients and their families/caregivers about drug regimens to achieve the best clinical outcomes and minimize therapy-related adverse events

SELECTING THE RIGHT MARKETING PARTNER FOR YOUR ADHERENCE PROGRAM

Next generation adherence programs hold significant potential for improving a brand's sales, but the success of those programs is often only as good as the partner a manufacturer selects. Once a manager determines that a tailored intervention is the right approach to address their adherence problem, they should select a partner with a proven track record and the expertise to determine which behavioral factors are relevant in each therapeutic area and for each brand. However, this approach will only deliver on its promise if it is supported by state-of-the-art technology and innovative thinking. Managers should also consider whether the program provides:

- A patient-centric approach
- A large nationwide network of participating pharmacies and a dedicated pharmacy help desk to ensure pharmacy participation

- Customizable and scalable services
- Reimbursement services with real-time pharmacy benefits, eligibility verification and claim denials and appeals assistance to ensure drug access
- Multiple channels to facilitate personalized patient communications
- A contact center staffed by trained customer service representatives
- Real-time segmentation to personalize program elements to meet patient needs
- On-staff clinicians, such as registered nurses, to provide patient counseling
- A robust technology infrastructure and comprehensive data analytics capabilities
- Point of sale CLAIM-based loyalty program
- The ability to fully integrate into a pharmaceutical manufacturer's marketing program to take it to the next higher level
- An ability to show measurable ROI

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