

# Generating growth through patient-centered commercial strategies

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#### **Abstract**

There is no dearth of consensus that the global pharmaceutical industry is in the midst of significant change. The search for new drivers of revenue is a strategic imperative. While firms strive to gain efficiencies in how products are discovered, developed and marketed, opportunities exist in redefining the underpinnings of commercial strategies. Of considerable value is the notion of crafting marketing strategy with the patient at the hub. This article discusses elements of a patient-centered commercial strategy, which hold considerable potential in generating revenue growth for a branded drug. The elements are characterized by a strong emphasis on developing practical marketing strategy and ensuing tactics that serve patient needs directly addressable with a commercial brand. Each element is discussed with real-world examples and supported by insights based on original research conducted by the author. Expending intellect, strategic planning and excellence in execution on these elements of commercial strategy will not only shift the locus of a modern bio/pharmaceutical firm toward patients – the customer entity responsible for its existence – it will also serve to replenish flat revenues yearning for more pipeline productivity in the midst of the patent cliff.

#### **Keywords**

Pharmaceuticals, biotech, strategy, marketing communication, market access, pricing

## Introduction

It is no secret that the market for prescription pharmaceuticals is predominantly composed of patients who suffer from chronic diseases. A total of 92% of prescription pharmaceuticals are consumed by patients with chronic diagnoses. 1 The nature of such treatment by definition describes a potential market that can subsist perpetually: in the absence of curative benefits, a pharmaceutical product indicated to treat a chronic condition is required to be taken for as long as possible - the goal is controlling the condition at best. In theory, then, a chronic care market represents a steady, non-shrinking market for an approved prescription product. However, considerable portions of such a market are underserved, even by approved medications available for treatment. From the perspective of pharmaceutical marketers, significant realizable opportunities exist; especially when a patient-centric view of the market dominates strategy development.

# Awareness and knowledge

The key challenge for a commercial strategist in charge of formulating marketing strategy for an approved product is to trigger treatment prescribing and therapy initiation. It is not a stretch to say that raising awareness of a chronic disease can set the stage for heightened product sales, provided diagnoses are made and treatment with the product is deemed appropriate.

The possibilities inherent in impacting sales of chronic care treatments through heightened awareness are large. For example, chronic conditions such as hypertension and diabetes impact large segments of any population. The wide prevalence of such

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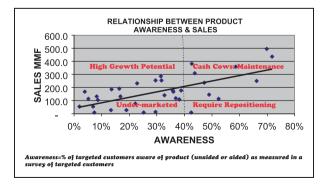
conditions results in considerable loss of economic output. Studies have estimated significant lost economic output due to hypertension (\$280b) and diabetes (\$105b).2 And yet awareness of the presence of these conditions is relatively low. Large segments of the prevalent population go undiagnosed. In the United States,  $\sim 20 \,\mathrm{m}$  people are estimated to suffer from diabetes. Approximately 27% of this population remains undiagnosed for the condition.<sup>3</sup> Part of the reason rests in the nature of the condition in that symptoms, if any, are largely not manifest - especially in the early stages of the disease. Compounding this is the fact that  $\sim$ 79 m additional members of the adult US population are prediabetic, that is, a condition that precedes diabetes and typically goes undetected. Recent research has shown that during prediabetes, some long-term damage to the body (especially the heart and circulatory system) may already be occurring. Aiming to increase awareness and improve diagnosis rates among such populations is a worthy commercial goal, not to mention the prospects of significant sales upside for a pharmaceutical product that can avail itself of the considerable life-time value inherent in the chronic nature of the condition. A new treatment for lowering blood sugars, for example, could position itself effectively in serving such a large market by generating clinical trial data that focus on the full continuum of patient conditions from prediabetes through moderate and severe diabetes. Armed with such data, raising awareness and improving diagnosis rates would ensure significant revenue streams over a much longer life cycle than what current diabetes treatments are designed for.

Studies by the author have reiterated the market dynamic by which increasing awareness impacts product sales. Higher awareness for a new pharmaceutical product among physicians increases the propensity to develop knowledge about it. Physicians increase their use of available modes of information to know more about the product. They open the doors to sales reps, attend symposia, scan journals and sign up for relevant medical education seminars that purport to provide more information about the product. Knowledge for the product is less a broad, amorphous concept and more a specific collection of information items such as data on head-to-head comparisons with the prevalent standard of care, data on response rates, adverse event profiles and actual peer reported experiences that may or may not tally with available clinical data. It is quite the norm that such knowledge has a direct bearing on physician prescribing decisions. When executed effectively, awareness building encourages proactive knowledge seeking among physicians and has a direct impact on product uptake. It is quite the case that more knowledge about an approved drug improves physician perceptions of its efficacy. Knowledgeable physicians are likely to present more objective views of the drug to potential patients. Barring documented clinical deficiencies, more knowledge of an approved drug among physicians leads to more usage.

The impact of awareness building on the undiagnosed prevalent population is widely known. Effective consumer marketing efforts can increase the flow of potential patients seeking advice and treatment, encourage patient/physician dialogue and set the stage for treatment with a product deemed appropriate for the patient. Studies have also shown the impact such consumer directed awareness can have on increasing sales of a prescription product.<sup>5</sup>

Figure 1 maps the relationship between physician awareness of 35 products indicated to treat hypertension and their sales at the same point in time in a large European market. The products span four classes that are equivalent to the extent that they represent alternative choices available to a physician, rather than unique product niches in and of themselves. In addition to depicting a relationship between product awareness and sales, the four quadrants provide useful diagnostic information about what could be done to increase awareness of specific products and thus impact sales. While the illustrated relationship is not necessarily causal, it clearly highlights the importance of product awareness in influencing product purchase and resultant sales.

Even if the focus is only on three of the largest prevalent chronic diseases such as hypertension, hypercholesterolemia or diabetes, the fact remains that between a quarter to a third of such sufferers are unaware of their condition and thus do not obtain a diagnosis, far less any treatment. A study published in the *American Journal of Medicine* indicates that the rate of clinical diagnosis among those with chronic kidney disease was 26.5% (95% confidence



**Figure 1.** In highly competitive markets, customer awareness of products strongly influences purchase decisions and resulting product sales.

interval: 17.9% to 35.1%), suggesting that 74% of patients with chronic kidney disease are undiagnosed. Not counting the at-risk population (which can benefit from disease prevention commercial activities), the potential inherent in tapping the prevalent, undiagnosed population through branded and un-branded marketing cannot be overstated.

#### Treatment rates

While the oft expected marketing mandate for pharmaceutical products is to raise and maintain awareness, relatively little emphasis is placed on the equally important responsibility for increasing treatment rates. Far too often marketing efforts fail to make a meaningful dent in the decision-making processes that lead to a treatment decision with a specific product. Only a third of the patients diagnosed with Alzheimer's in the US receive any treatment. Only 1 out of 5 HCV infected patients receive treatment. Similarly, less than half the patients diagnosed with multiple sclerosis, rheumatoid arthritis or anxiety receives any treatment. Treatment rates for patients outside the US are far lower across a wide variety of diseases. The diagnosed, untreated patient population represents a sizable source of unrealized revenue for both new and in-line pharmaceutical products.

In the author's experience persuading providers to treat the diagnosed patient with a pharmaceutical product is a significant, albeit achievable, marketing goal. Strategies that can help overcome physician inertia favoring the status quo include

# Improving patient and provider access to a prescription product

It is quite too common that limits on access to a product imposed by private or public insurance is the most important barrier to its uptake. In systems where patients share part of the product cost, higher product copayments compared to other prescription products (or to patient affordability) can deter product uptake. The crux of the issue, however, lies deeper than formulary restrictions or high copayments. The key challenge is for the product's marketers to provide sufficient, compelling evidence from well-designed pre- and post-launch studies that moves beyond establishing efficacy to proving effectiveness in generating meaningful patient-related outcomes. Backing such evidence with data on a product's cost effectiveness in comparison to a valid standard of care is a sensible commercial path to pursue.8 Developing value propositions rooted in data that matter to health insurers and clinicians holds the best promise in alleviating access barriers. In the context of a comprehensive,

patient-focused commercial strategy, such propositions are a natural springboard for generating sustainable revenue growth. 9

Providing clinical information – through clinical trials and commissioned medical publications – that challenges the prevalent treatment paradigm

Often, chronic conditions are treated in a sequential paradigm where benign intervention in the form of lifestyle changes (diet and exercise) is a necessary first step. It is not uncommon for patients to selftreat themselves using inexpensive over the counter (OTC) medications, sometimes at the recommendation of their physician. Treatment with a prescription product is provided as an inevitable third resort when benign intervention is ineffective. Developing and communicating relevant arguments based on proven data that convince providers to change the existing way of treating a condition with a prescription product is a worthy strategy. Making physicians realize the value of treating patients earlier with an indicated prescription product is an important marketing objective that, when realized, would help increase existing treatment rates, facilitate faster uptake and generate higher than expected revenues.

# Developing a comprehensive marketing strategy that integrates key elements of traditional pharmaceutical marketing

More often than not, the onus of impacting treatment rates falls on the sales force. Excessive reach and frequency for providing messages that seek to compel physicians into prescribing a new product can only go so far. Integrating highly targeted sales effort optimized for specific physician segments into a multi-faceted marketing plan that includes measured use of other elements such as marketing outcomes evidence to insurers, a pricing and access strategy that seeks to maximize product availability rather than profit per se, using direct-to-patient mechanisms for communicating simple and effective messages encouraging inter-patient communication, physician visits and interaction, offering co-pay cards to alleviate product cost and building and reinforcing mechanisms that encourage treatment compliance can go a long way in enhancing treatment rates in favor of the marketed product.

Opportunities to increase treatment rates above the status quo also exist in expanding the breadth of a label, refining the type and number of providers targeted for commercial activities, improving target lists that specify

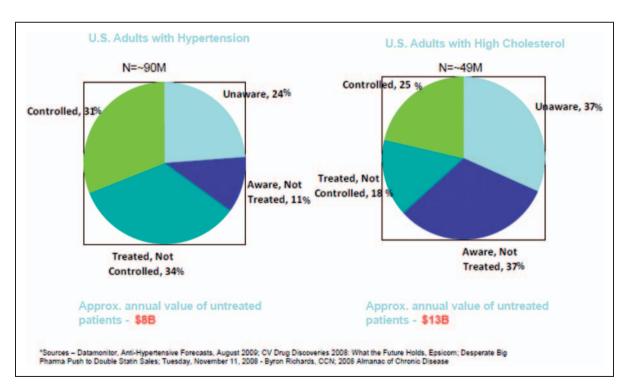
the type and number of insurers responsible for ensuring product availability and judiciously enhancing the extent of reach into patient-markets globally. Additionally, considerable untapped potential for sustaining treatment rates resides in extending revenue streams of in-market products through longer life cycles, depending upon strategy choices that result in line and product extensions, newer doses and formulations as well as new forms of drug delivery.

# Leveraging the relationship between awareness, diagnosis and treatment rates

Figure 2 presents a market data snapshot of two of the most prevalent chronic diseases. An analysis of the data highlights revenue growth opportunities for pharmaceutical products indicated for treating patients suffering from the diseases. The opportunities are better emphasized when the data are reviewed from patient perspectives. Pertinent points to note include the following:

 Considerable untapped revenue potential exists in the very basic commercial responsibility to increase disease awareness among sufferers who are already afflicted but do not know. It is a well-known fact of science that neglect of either of the two conditions

- shown can lead to irreversible heart disease the leading cause of mortality; not to mention associated avoidable costs to the healthcare system. As such, commercial strategists would do well to take a patient-centric view and realize the social and commercial benefits of raising disease awareness in the two conditions.
- Large, future revenue potential exists in good sized chunks of the affected populations who are aware of their condition but for reasons such as lack of access, affordability, sufficient motivation or degree of severity, remain untreated. Taking a patient-centric view, an astute commercial strategist would devote reasonable time and effort toward moving such patients into outpatient clinics and under physician care so as to increase the probability of proper diagnosis and treatment with a commercially available product. That enhancing social good, reducing systemic costs and - at the same time - improving the prospects of higher revenue without sizable investments in R&D are all intertwined and aligned in the same direction only attests to the relevance and attractiveness of such
- An even larger revenue potential exists in about a third of the affected populations who are receiving sub-standard or inappropriate treatment resulting



**Figure 2.** Revenue growth opportunities exist in leveraging marketing strategies to increase awareness, diagnosis and treatment rates.

in lack of efficacy. Such patients are already under physician care, which increases their value to a commercial strategist, given that no upfront awareness, education or motivational marketing costs need be incurred. The commercial focus, instead, needs to key in on the reasons for lack of disease control, despite treatment. Often the reasons for such an outcome are manifold, such as improper diagnosis, inappropriate selection of treatment, lack of compliance or follow up, the nature of resident co-morbidities or the severity of the condition itself necessitating transfer to alternative sites of care. It falls to the sales and marketing interface usually a sales representative or a medical liaison – then, to rise above the ambit of his/her usual responsibilities and identify such cases; and to offer solutions - including alternative treatment products with the necessary rationale - that benefit the patient, and in the process also improve the chances of a sale. It is also not unusual for such interactions to generate debates on the comparative efficacies of available treatment options and/or the availability of the right type of clinical data to advocate or refute the use of specific treatments. In other words, taking a patient-centric view of the problem suggests opportunities to re-craft value propositions and shape future clinical research designed to provide valuable data supporting appropriate product use. As a consequence, significant revenue growth opportunities are identified.

# Point of care leverage

Far too often, brand plans striving for new avenues of growth come up short on ideas that leverage patient needs, proclivities and their influence on the prescribing process. It is not an exaggeration to suggest that effective brand planning requires as much emphasis on patients as on physicians and payers. Sufficient public information and proprietary research conducted by the author indicate the impact patients have on brand growth through interactions with the physician at the point of care, purchase behaviors at the pharmacy and compliance with prescribed treatment. Careful studies of patient behavior and related attitudinal underpinnings can unearth critical sources of patient leverage that can be harnessed to generate vital revenue growth.

Consider a research study executed on behalf of a pharmaceutical product indicated to treat multiple sclerosis. A key purpose of the study was to understand critical patient-related drivers that could ignite product uptake. A random sample of neurologists actively treating multiple sclerosis with available prescription

medications provided a total of 223 patient forms, each form representing a unique patient in terms of details on demographics, diagnoses, treatment received and patient/physician interactive dimensions during patient office visits over a 5-month time frame. Patient data thus collected were analyzed using univariate and multivariate statistical modeling methods. Key insights of note that are easily generalizable to the wider population of patients included the following:

- Patient-physician interactions were the most important drivers of treatment selection. Rather than make a treatment decision in isolation, physicians and patients who discussed the pros and cons of specific treatment options tended to make clear, informed choices perceived to be in the best interests of the patient.
- Not all patients were open to engaging in such a dynamic. Patients who were younger, who sought more information on their own, who relied more on the experiences of other patients through informal interactions and formal exposures to relevant societies were more prone to discussing specific treatment options with their providers, thereby leading to the selection of specific branded products over others.
- While providers focused more on the comparative treatment efficacies of competing treatment options, patients evaluated available medications on side effects such as the incidence of influenza, needle size and its impact in producing inconvenient injection site reactions. As such, treatment options that had favorable adverse event profiles had a much better chance of being prescribed as a result of meaningful patient—physician interactions.
- Physicians tended to discuss treatment options requested by patients specifically. The content of the patient-physician interaction focused on treatment options of perceived importance to patients. Provided the physician was convinced of the value of prescribing a particular product, more often than not patient requests for a product were granted.
- The longer a requested brand was discussed as part of a patient-physician interaction, the higher the chances were of it being prescribed.
- Physicians who were relatively more knowledgeable about a specific treatment tended to prescribe the product more as a result of a patient request during a patient-physician interaction.

The value of such insight in shaping effective brand planning is self-evident. A wide variety of strategy options that put patients at the center of marketing efforts begin to crystallize. For instance, considerable value exists in:

- Evaluating options to enhance the quality and frequency of patient information seeking behaviors including providing more information about other patients' experiences, more avenues for self-expression in a formal forum where other similar patients can share experiences and proven data on available treatment options and their pros and cons compared to the marketer's brand.
- Thinking through marketing levers that encourage patient-physician dialogues; including presenting vignettes of productive dialogues through advertisements, developing direct-to-patient marketing materials focused on encouraging such dialogue – while presenting brand-specific data that would provide the patient with relevant content.
- Designing product messages that address specific physician and patient needs recognizing key similarities and differences as is evident from results of the research project.
- Finding ways to encourage physicians to spend more time engaging patients in productive discussions about the marketed brand in the context of its patient-related benefits compared to its competition.
- Shaping brand strategies that drive specific patient behaviors in concert with physician decisionmaking processes, which can go a long way in impacting treatment rates for the better.

In this context, an anonymous reviewer reiterates the importance of mapping patient journeys, a qualitative research technique that follows patients and their care providers over time, probing for the reasons behind physician decisions to prescribe specific products and patient decisions to comply with them. The technique seeks to understand the social and emotional reasons behind behaviors so that better, patient-centric decisions can be made. The use of ethnographic techniques to understand the dynamics of patient-physician interaction is common. Recent innovations in adapting online qualitative research techniques to accomplish such goals are worth mentioning. <sup>10</sup>

# Physician communication

An equally critical, albeit under-recognized driver of quality treatment is physicians' inherent style of communication. Consider the following facts:

 The most common cause of malpractice suits is failed communication of physicians with patients and their families.<sup>11</sup>

- In a survey, 83% of MDs believed communication was as important as technical skills in patient outcomes; however, only 18% believed they had had good training in patient communication.<sup>12</sup>
- o In a large-scale patient study, a person-focused interaction style appeared to be the most congruent with patient-reported quality of primary care. Physicians with the person-focused style rated highest on four of five measures of the quality of the physician-patient relationship and patient satisfaction. In contrast, physicians with the high-control style were lowest or next to lowest on the outcomes. Physicians with a person-focused style granted the longest visits, while high-control physicians held the shortest visits a difference of 2 min per visit on average. The associations were not explained away by patient and physician age and gender.

Taking a patient-centric view in two-way communications related to evaluation, diagnosis and treatment holds the promise of enhancing the quality of patient interactions, treatment decisions and subsequent patient outcomes.

"Social structural barriers impede effective communication, however, and information giving remains problematic. Doctors tend to underestimate patients' desire for information and to misperceive the process of information giving. The transmission of information is related to characteristics of patients (sex, education, social class, and prognosis), doctors (social-class background, income, and perception of patients' desire for information), and the clinical situation (number of patients seen). Doctors' nonverbal communication abilities are associated with outcomes of medical care such as satisfaction and compliance. Regarding the sociolinguistic structure of communication, doctors often maintain a style of high control, which involves many doctor-initiated questions, interruptions, and neglect of patients' "life world."" 13

# Behavior at the pharmacy

Published research and proprietary work conducted by the author indicates that patients engage in a variety of behaviors at the pharmacy that have direct bearing on product choice, market share and revenue. In addition to making decisions about whether to purchase a product at the point of sale at the offered price, patients often ask for a lower priced branded product, a cheaper generic product or simply walk away without making a purchase. Deciding to postpone product purchases in favor of a discussion with their physician about alternate products is also not uncommon. It behooves a marketer to study patient behaviors at the

Table	1.	Patients	behavior	at the	pharmacy.	а
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Copay	Definitely purchase	Will definitely not purchase	Will ask physician for alternatives	Will ask pharmacist for lower priced alternative
\$25	55	4	25	8
\$50	24	2	35	16
\$75	19	5	39	13
Co-insurance of \$250	0	9	47	12
Co-insurance of \$450	0	6	50	13

<sup>&</sup>lt;sup>a</sup> Improving adherence rates can have a significant impact in lowering net healthcare costs. Figures represent % of patients who would engage in behavior shown, at each of the indicated copay amounts required to purchase the product.

pharmacy in order to determine the key economic and marketing levers sustaining and enhancing product purchase that may work in favoring of increasing product purchase rates above the norm under the status quo.

Table 1 presents data from a willingness to pay experiment with patients for a new drug slated for launch in the US market. The experiment sought to measure patient reactions to a range of possible copayments at the pharmacy in terms of three alternative behaviors. Purchase intent was measured on a fivepoint scale with a neutral endpoint. Note that while patient intent to purchase a product drops significantly as cost increases, the proportion of patients who intend to refuse purchasing the prescribed product outright does not. The desire to initiate dialogue with the prescribing physician overrides any such knee jerk reaction. Needless to say, this represents excellent opportunity for the marketer. Patients need rationale to buy into the value provided by the product even at high cost. Physicians need information to resolve the patient-physician dialogue in favor of the marketer's product, especially of the type that establishes the product's holistic value proposition, rather than one that focuses on its efficacy, safety or convenience alone.

Experiments such as these also provide valuable grist toward pricing decisions that can be geared to generating significant revenue and profits – by following a strategy of market skimming or, alternatively, following a strategy that aims to provide wider access and availability by encouraging market penetration at a lower cost to patient. Often, data such as these – when combined with price sensitivity research with physicians and payers – provide valuable insight into the net impact of patient behaviors on product market share and subsequent revenue. One published research in the category of proton pump inhibitors (PPIs) indicates that a 5% difference in PPI copay leads to a 2.5% differential in market share. It is estimated that over 65% of consumers act on higher prices and switch to

lower cost medicines or opt not to buy a prescription over 40% of the time.  $^{14}$  A recent study published in the *Journal of the Canadian Medical Association* reports that  $\sim \! 10\%$  of Canadians who receive a prescription do not fill it due to cost-related reasons.  $^{15}$ 

It is critical to understand that attempts to offer patients pharmaceutical brands at lower copayments is not inconsistent with business objectives to increase revenues and profits. Simply put, it is possible to determine the optimal copay that is low enough for large numbers of patients to purchase the product such that revenue (or profit) is maximized. Volume, rather than price alone, is relied upon as a driver of revenue. Such a strategy needs to occur in tandem with manufacturer efforts to enable payers and distributors to make available the pharmaceutical product on their formularies in a way that allows sufficient access to the product at the desired copay. Such efforts typically involve offering incentives to payers in the form of monetary rebates and guarantees. Whatever the form of the incentive, sufficient marketing of the product's value proposition to payers, patients and physicians alike is essential in sustaining the desired dynamic whereby payers are incentivized to increase access to the product at a lower price with few or no restrictions, physicians are convinced the product has differentiated value and is easy to access and patients believe the product is relatively inexpensive, valuable and worth purchasing at the price incurred. Relying on payer incentives alone to offer patients products at lower copays is not sufficient. Physicians are not bound by such contracts to prescribe the product – the sensible marketing strategy is to continually inform them about the relative ease of access to the product at the lower copay so that they are convinced enough about its heighted value to patients and thus prescribe more of it. Similarly, the desired dynamic is facilitated by an impactful segmentation strategy. Patient sensitivity to product copays varies along a number of dimensions such as geographic location, income and affordability,

disease severity and type of insurance coverage. As such, considerable variation in response to lower copays is prevalent. A related fact is that not all payers are candidates for rebates that enable easier access at lower copays, given regional differences in payer customer populations, types of products offered to serve such populations, the relative importance of disease areas and their treatments in the regional population, and payer economics of relevance to providing regional coverage in the disease area. Further, differences exist in how some types of physicians react to product access restrictions as compared to other product features, available alternatives and suitability of a value proposition to a type of patient. As such, implementation of a strategy that relies on relatively low copays is effective only to the extent that it has been devised with due consideration given to patient, payer and physician segments that may be impacted and thus can be expected to react in ways beneficial to increased and sustained product uptake. When such segments are served continually by targeted marketing programs that raise awareness and knowledge about easier product access, lower copays and the overall value proposition, the chances of realizing increases in product revenues and profits as a result of strategies that improve access and patient response at the pharmacy are high.

### Patient medication adherence

Perhaps the single most important driver of growth for a pharmaceutical brand is adherence. Given the chronic nature of most afflictions currently treated with a pharmaceutical product, sustaining patients on a medication they have already tried is also one of the more efficient marketing strategies holding the potential for revenue growth over time.

The revenue opportunities inherent in encouraging adherence can be gauged through data captured in published and proprietary research. According to IMS data, of any 100 prescriptions written for a drug on average, 30%-50% never get to the pharmacy. A third to half of prescriptions written is filled. Just about 25%–30% of prescriptions are taken as directed. 16 According to a report from CapGemini on average adherence levels drop over the course of the patient journey from 69% of patients filling their first prescription to 43% continuing their treatment as prescribed after 6 months.<sup>17</sup> Given that an average brand name drug prescription costs \$198 (at an average co-pay of \$24-\$35, depending upon formulary status), 18 the revenue potential inherent in encouraging adherence is vast. According to one estimate, unfilled prescriptions cost US pharmacies \$8b in lost revenues.<sup>19</sup>

**Table 2.** The relationship between adherence and healthcare spending – type 2 diabetes.<sup>a</sup>

Adherence (%)	Medical spending (\$m)	Drug spending (\$m)
1–19	8,812	55
20-39	6,959	165
40-59	6,237	285
60-79	5,887	404
80-100	3,808	763

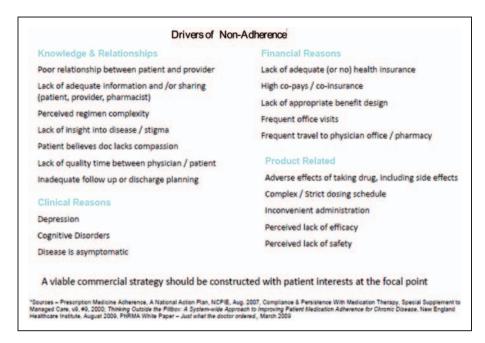
<sup>&</sup>lt;sup>a</sup> Improving adherence rates can have a significant impact in lowering net healthcare costs.

A strategy of stressing adherence holds the twin virtues of generating healthy incremental revenue and positively impacting societal well-being. Table 2 presents data from a study establishing a relationship between adherence and annual medical and drugrelated spending in the US for type 2 diabetes.<sup>20</sup>

# The relationship between adherence and healthcare spending - type 2 diabetes

Medical spending covers costs incurred for emergency, inpatient and outpatient visits associated with type 2 diabetes. Drug spending covers costs related to medications meant to treat type 2 diabetes. Adherence is defined on the basis of days' supply of maintenance medications for type 2 diabetes. Note that as patients' adherence to medication increases, medical costs decrease. Corresponding increases in drug-related costs are more than offset by substantial decreases in medical costs, resulting in net reduction in overall healthcare costs. In addition to type 2 diabetes, the study focused on similar analyses of patients with hypercholesterolemia, hypertension and congestive heart failure. For each of the four conditions studied, hospitalization rates were significantly lower for patients with high medication adherence.

The marketer's search for solving the adherence problem invariably leads to a need for better understanding patients and their motivations. Under the current commercial model, patients accept physician recommendations for drugs as a given. In lieu of a considered patient–physician dialogue leading to the prescribing of a mutually acceptable drug, patient proclivities, circumstances and motivations are the primary driver of adherence. It is no surprise then to note that as much as 75% of patients do not take their medications as prescribed. One out of every two patients with chronic conditions fails to comply with prescribed treatment. Four out of five HCV patients are non-compliant. Only a third of Alzheimer's patients comply with prescribed treatment. Compliance rates



**Figure 3.** Lack of adherence to medication is largely driven by factors that can be managed through more effective marketing and access strategies.

for rheumatoid arthritis, multiple sclerosis or anxiety are 50% or less. Less than 2% of diabetic patients follow treatment protocols, such as checking fasting glucose levels and taking medication according to prescribed regimen. Needless to add, it is estimated that plugging such leaks in adherence could result in a 36% increase in the number of prescriptions written per year, equating to revenue increases of \$177b. 21

Non-adherence can result from a wide variety of reasons, most of which can be categorized into one of four broad dimensions:

- 1. Relationship with provider
- 2. Financial reasons
- 3. Product reasons and
- 4. Clinical reasons

Figure 3 provides a breakdown of reasons within each of the four dimensions. It is instructive to note that a large number of such reasons can be addressed by mechanisms that are directly under the domain of marketing strategists. For instance,

- Product-related reasons resulting in lack of adherence can be directly addressed by providing appropriate information to patients that clear misconceptions and increase confidence in matters such as product safety and efficacy.
- Financial reasons are mostly related to lack of adequate access, which can be mitigated by providing

- customized, patient-friendly benefit designs and marketing interventions (such as co-pay cards) meant to offer financial relief.
- Clinical reasons are best addressed through encouraging detailed and productive dialogue between patient and provider, facilitated by direct to patient marketing through channels such as direct mail, the internet and its myriad communities and point of care advertising.
- Issues pertaining to poor interpersonal relationships with the healthcare provider are best addressed through a combination of patient and provider education initiatives, designed with patient interests in mind. Often, a focused marketing campaign combining direct to patient communication with targeted physician messages during a specific timeframe works well in this regard.
- It is not a stretch to believe that better interpersonal relationships between patients and healthcare providers usually also results in the sharing of information that reinforces such relationships while setting the stage for higher compliance.

It is not unreasonable, then, to expect that a viable commercial strategy with specific and meaningful marketing focus executed through effective, patient-focused programs can go a long way in improving medication adherence. And improved adherence can and will no doubt have a significant impact on revenues.

### Conclusion

As the modern pharmaceutical industry comes to terms with radical changes in its operating environment, strategies to sustain historic rates of revenue growth are few and far between. Re-envisioning strategic perspectives with the patient as a central, eminently justifiable source of product adoption and revenue provides considerable grist for devising creative marketing strategies and refining existing practices. An anonymous reviewer has suggested that understanding unmet patient needs in pre-clinical R&D can lead to better patient-centricity throughout the drug development and commercialization process. From discovery through development, commercialization, launch and in-market growth, placing high importance on valuing patients as customers of marketable entities clarifies commercial priorities, refines and reshapes products and enhances prospects for their sustained adoption. This article outlines elements of patient-centered strategies, which hold considerable potential in generating revenue growth for a branded drug. The elements are characterized by a strong emphasis on developing practical commercial strategy and ensuing tactics that serve patient needs directly addressable with a commercial brand. Tactical programs developed to propagate such strategy hold the promise of delivering proven pharmaceutical benefits to much larger patient populations than currently while ensuring stronger, longer lasting revenue streams.

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#### Conflict of Interest

The author declares that he does not have any conflicts of interest.

#### References

- Anderson G. Chronic conditions: making the case for ongoing care. Johns Hopkins University, November 2007.
- DeVol R, Bedroussian A, et al. An unhealthy America: The economic burden of chronic disease. The Milken Institute. October 2007, www.chronicdiseaseimpact.com.
- Centers for Disease Control & Prevention. Diabetes Public Health Resource, 2011 National Diabetes Fact Sheet, 2011.
- 4. http://www.diabetes.org/diabetes-basics/prevention/pre-diabetes.
- The impact of direct-to-consumer advertising on prescription drug spending. Kaiser Family Foundation, June 2003.
- Ryan TP, Sloand JA, Winters PC, et al. Chronic kidney disease prevalence and rate of diagnosis. Am J Med 2007; 120: 981–986.
- Cowen & Company. Therapeutic categories outlook. New York: Cowen & Company LLC, 2007.
- Rao SK. Strategic priorities for specialty care products. PM360 Feature, PM360, August 2011.

- http://en.wikipedia.org/wiki/Ethnography and http://www.decisionanalyst.com/Services/Ethnography.dai.
- The Physician Executive. Reducing litigation costs through better patient communication, June 2004.
- Putnam J and Kennedy J. Teaching physician-patient communication (AIDET) for results in all pillars. What's Right in Health Care.
- Waitzkin H. Doctor-patient communication, clinical implications of social scientific research. JAMA 1984; 252: 2441–2446.
- 14. Shrivastava A, Bellaire D and Singh A. Show me the money: why companies overpay MCOs & how they can stop, September 2005.
- Law M, Cheng L, Dhalla I, et al. The effect of cost on adherence to prescription medications in Canada. CMAJ January 2012.
- 16. Long D. U.S. trends, issues, outlook and challenges for Amgen. Industry Relations, June 2006.
- 17. Patient adherence-the next frontier in patient care. Capgemini Consulting, 2011.
- 18. Data from Wolters Kluwers Pharma Solutions, published in 'Prescription drugs prices to plummet as more generic versions coming,' Associated Press, July 24, 2011, & Chicago Sun Times, http://www.suntimes.com/business/6689347-420/pre scription-drug-prices-to-plummet-as-more-generic-versionscoming.html.
- 19. Non compliance with medications: an economic tragedy, with implications for health care reform, Task Force for Compliance, April 2004. Also cited in Chart 5.6, Almanac of Chronic Disease, 2009, Partnership to fight chronic disease.
- Sokol MC, et al. Impact of medication adherence on hospitalization risk and healthcare cost. Med Care June 2005.
- Reviving the Primary Care Market, IMS, Special Pharma Strategy Supplement, 17 July, 2008, IMS.

#### Author's Biography

Sanjay K Rao is vice president, life sciences, at CRA International. As a consultant, manager and executive Dr Rao has led teams of managers and research professionals in developing innovative solutions to significant strategic marketing, market research, forecasting, and new product and portfolio planning challenges at each of the 10 largest global bio/pharmaceutical firms. Prior to his current position at CRA, he was director of business analysis and information on brand teams at Amgen. Dr Rao has taught marketing strategy, market research and communications at the Wharton School, and led executive seminars for professionals in the biopharmaceutical industry. His publications have appeared in journals such as the Journal of **Business** Commercial Strategy, Journal of Biotechnology, Journal of New Product Innovation Management, Marketing Research, Marketing Health Services, Product Management Today, Journal of Pharmaceutical Development & Regulation, SCRIP Issues in Pharmaceutical Perspectives, PM360, The Pharmaceutical World Directory, Pharmaceutical Executive, **Tournal** of Medical Marketing,

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