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Get more from your pharma commercial spend using advanced analytics

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Predictive analytics and data visualization offer pharma business leaders the opportunity to transform commercial-spend optimization and lift returns by 10 to 25 percent.

We've all been in a meeting where someone says, "If I increase your marketing budget by 10 percent, how much more top line would you commit to?" Maybe it's, "We're not getting what we used to out of this commercial mix; how can we get more bang for the buck?" Or, it could be, "This launch isn't hitting our preapproval sales projections; what can we do to drive faster growth?"

If you're like most pharma commercial leaders, you would traditionally respond to such questions with a mix of experience-based hypotheses, situational judgment, or perhaps a process of elimination ("We've tried everything else!"). But what if you could answer each of these questions precisely, analytically, and confidently, knowing why a change will result in improved performance—not just that it theoretically could?

Today, the explosion of new commercial data available to pharmacos, combined with new methods of advanced analytics and data visualization, offer exactly this opportunity. This article provides an overview of how leading companies are already answering questions like the ones posed above, using predictive analytics rather than possibilities and assumptions.

The typical situation

External commercial spend (including all commercial-spend levers across marketing, the sales force, and payor rebates) makes up the vast majority of operating cost for most pharmaceutical companies today. For many, this spend has been increasing faster than revenues over the past few years. For example, from 2013 to 2015, rebate spend climbed at a compound annual growth rate of 34 percent and direct-to-consumer spend grew 20 percent, but gross sales rose only 11 percent. Additionally, companies continue to invest heavily in direct sales forces, despite concerns that they are not as effective as they once were. Meanwhile, ample evidence suggests that both patients and physicians are consuming more

and more information (and increasingly connecting with one another) via digital channels. Yet many pharmacos are struggling to shift their marketing mixes to respond effectively.

Managers need tools to help them adjust to the new commercial reality. These tools need to go beyond the media-mix-modeling (MMM) approaches that have proved useful in industries such as consumer packaged goods, since such approaches may not be suitable for managing the complexity of pharmaceutical commercial models. Few traditional approaches adequately reflect the interconnectedness of sales, marketing, payor, patient support, and other commercial levers in pharma. For example, disadvantaged managed-care access, relative to competition, leads to lower responsiveness to sales details. In our experience, for the same brand, promotion responsiveness for healthcare practitioners (HCPs) whose patients have disadvantaged managed-care access can be up to a fifth of the impact per detail, compared with HCPs whose patients have parity managed-care access. Insufficient sales support leads to poor pull-through and failure to capture the full value of access. By recognizing the interdependencies between managed-care access and sales spend, we have seen companies generate up to 5 percent in incremental revenue through better targeting with the same spend. Pharmacos need analytical approaches that can appropriately capture these complex interactions.

A new approach to commercial-spend optimization is needed—one that encompasses all these variables and helps leaders make effective trade-offs.

A new era of capability

Fortunately, recent technical and analytical advances have made it possible to take a comprehensive approach. These advances have come in four main areas:

1. The ability to rapidly create and manage broad data sets. Central to any comprehensive analytical approach is the creation of a foundational data set that includes all relevant sales, marketing, and payor variables. This data set is most powerful when it is both granular (that is, built at the HCP, account, and geographic-market levels) and broad, including information on marketing (for all marketing channels), sales force (for instance, visits, messages, and customer-relationship-management data), and payor (for example, relative payor access, rebate levels, and geographic reach by payor). Many business leaders worry that assembling a data set like this implies a massive IT project that will take years and substantial investment to complete. It's true that companies that have invested in amassing myriad disparate data types into a single data lake do have the potential to create powerful insights. That said, we have found that in a short span of time (weeks or months, not years), companies can assemble a data set that advances their thinking by using a combination of "off the shelf" databases from third parties and existing databases from within the enterprise. In most instances, this is about structuring and combining data sets and metrics that already exist, and stitching them together using off-the-shelf tools to reveal new insights. For example, when one company realized that it did not have the information it needed,

it rapidly created a small team and built its data set within eight weeks—and the result, created using data that was already being collected, provided a level of transparency and objectivity that didn't previously exist. Companies can build on a foundational data set to create broader data sets and generate further insights.

2. The leap in processing power offered by cloud computing. While Moore's law, which defines the growth rate of computing power, has begun to slow at the individual microchip level, the amount of power that is available on demand—in the cloud—has only increased. This computing power, when paired with innovative tools for data visualization, enables granular analyses at scale to uncover a deeper, more nuanced understanding of performance. Adoption of these technologies for commercial spend has been inconsistent; however, some companies are beginning to deploy such tools in a rapid and repeatable manner. One company, for instance, used them to answer questions like these in minutes: Do HCP accounts tend to be more responsive to emails when they are also detailed more often by the sales force? How does that change for HCPs whose patients tend to have better managed-care access?

3. The emergence of advanced-analytics platforms that use an ensemble of approaches. As mentioned above, the three spend archetypes (marketing, sales, and payor) work in tandem to drive performance (scripts, volume, share, and so on). It follows that any response curves used to model performance should reflect this dynamic. In our view, the best way to measure impact is by using an ensemble approach—one that includes both regression analysis and test-and-control approaches—rather than using one or the other exclusively. Companies that use a single approach exclusively (such as econometrics or mix modeling) may come up with an accurate representation of a single variable, "holding all else constant," but in reality, nothing is being held constant. Fortunately, new advanced-analytics platforms offer a suite of approaches that can be used in combination. These include not only standard statistical approaches but also machine learning, natural-language processing, and other techniques to undertake analyses that use structured and unstructured data in combination in the same analysis. By using an ensemble of approaches, companies can also measure the impact of more variables simultaneously (for instance, email campaigns) than would be possible if one relied on a single approach. One company was able to measure the returns of 20 percent more variables by adopting this approach rather than using econometric modeling alone. The ensemble approach uncovered investment opportunities that would previously have gone unnoticed. And, because it used both modeling and test-and-control analyses, the company also had greater confidence in the insights.

4. New optimization algorithms and predictive analytics that guide spend reallocation. The increase in computing power has also enabled massive improvements in optimization capabilities. New and emerging approaches now enable a degree of insight that could only be dreamt of a decade ago. By applying these powerful algorithms to granular response curves, we can unlock a set of concrete actions to implement immediately. Packaging algorithms in easy-to-use tools leads to better cross-functional engagement across both the business and analytics teams. For example, one company used cloud-based tools,

through a simple interface, to identify specific sales territories that would benefit significantly from increased digital spend against an important segment of customers. The analytics team used these tools and worked side by side with the business team to refine the value at stake. The outcome from this exercise was a significantly stronger working relationship, greater confidence in the analytics, and improved sales performance.

Capitalizing on this potential

It's one thing to know that a new level of analytical sophistication should be possible and yet another to take advantage of that new potential. Those looking to start or reset their approach should recognize that, while significant strides can be made quickly, not everything needs to be done at once. This is a journey in which organizational capability will evolve over time as new muscle is built. Additionally, long-term success requires equal parts effort and mind-set. That said, there are five key principles that increase the odds of success and can drive impact in as quickly as three months:

1. **Get the right leaders in place.** The team driving this needs to be multidisciplinary, so it is important to have strong champions in analytics, marketing, sales, and payor and managed markets. Additionally, IT will be critical to success, so you need commitment and partnership from that team. These leaders should ideally have a clear and shared vision of success and be thought partners to the working team along the way.

2. **Start with the hypotheses; use that to guide data and analytics, but focus only on what is relevant.** Formulate hypotheses and business questions early, and use that to guide data collection and analytics. Data are always messy to integrate and no company has perfect data, but it's important to not let the perfect be the enemy of good. While truly "garbage" data will create garbage results (as the old adage goes), advances in data-cleansing tools and fuzzy-matching approaches mean that a lot can be done with data sets that previously would have been onerous to work with. It will be important to focus on what information is needed to answer the questions at hand rather than what's nice to have or theoretically optimal. Gathering data on every single metric that might be needed creates both scope and timing problems.

3. **Move quickly to refine the hypotheses and generate insights through analytics, then iterate.** Once the initial data set has been built, quickly leverage it to pressure-test and refine the hypotheses on customer segments and to prove or disprove commonly held beliefs. Make use of the latest tools to get prescriptive insights, and focus on what can be implemented in the market to capture quick wins, prove the value, and, most important, learn. Real-world experience is the best way to tune your algorithms and predictive models. Following a test-and-learn approach will also help you set the right priorities for which data to fold into your modeling and how to get your organization to apply the insights.

4. **Along the way, lay the groundwork for a new approach.** During your analytics journey, determine the potential from creating a new approach to repeatedly generate meaningful insights for the business. Implementing a new approach to commercial spend will drive change only if it is used consistently; while adult behavior can be changed, repetition is

necessary to make it happen. Be purposeful about creating moments along the way for the organization to practice living the new approach, so that it becomes second nature. Additionally, identify ways to integrate the insights generated into the existing work flow of your employees. In some cases, this is as simple as centrally adjusting the sales force's call plan or directing your media-purchasing agency to solve for a different mix. In other cases, it means adjusting the information the sales force's customer-relationship-management system presents or adjusting the content of selling materials. Finally, focus extra attention on the culture change that may be necessary to adopt the new approach as standard business practice.

5. Implement the allocations to capture the value. Developing insights is only part of the answer—it's just as important to seed the actions in the market quickly to reap the value. Best-in-class companies have built flexibility into their business processes to allow for adjustments all through the year, should the opportunity arise. The commercial leaders in these companies also tend to be champions of these initiatives and are great role models for the collaborative and pragmatic mind-set that it takes for this to be successful. These leaders also ensure the right participation from both finance and IT—key partners on this journey.

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Optimizing your commercial spend is not easy; it takes investment in new processes, capabilities, and, in some cases, technology. It also requires a new mentality about how business decisions are made. The change, however, is worth it: companies that have fully embraced the new, integrated approach to commercial-spend optimization have seen improvements in returns of 10 to 25 percent during the first year of implementation. With further tuning, these can rise even higher. ◻

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