



Healthcare & Life Sciences

Biotech uses data to unlock \$100M opportunity to improve revenue

The Big Picture

A leading pharmaceutical company was facing a decline in the sales volume of its flagship drug, which usually accounts for over \$5 Billion of its annual sales. Less than 30 percent of physicians accounted for a loss of prescription sales worth approximately \$400 Million. As a result, the company wanted to predict which physicians were likely to show a continued decline in drug prescription behavior to effectively engage them well in advance for improving sales.

Transformative Solution

To address its revenue challenges, the company defined the drivers of prescription sales decline and identified which physicians were likely to decline in their drug prescription activities. Physicians, highly probable of showing a decline in sales, were prioritized looking at their potential patient volume and put in segments based on their market share to drive actionable decisions. From there, physicians were targeted through marketing and sales interactions to improve prescription behaviors.

To predict prescription activity decline, machine learning models were developed that used data on physicians who were targeted by the client's sales force. Numerous hypotheses were created on characteristics that could impact prescription activities, which helped identify the right data for analysis. This included data from sales, calls, marketing, claims, and physician attributes. It helped the pharma company identify over 1,800 features from the data sources to analyze changes in physician activity over the months of the decline—such as number of calls to a physician & extended team, DTC TV impressions, DMARD sales, and number of approved claims.

Varied traditional and advanced data science techniques, such as logistic regression, machine learning, were used to build the best model. The model identified different drivers of physician decline behavior validating various hypotheses, and revealing the impact of each factor on prescribing behavior.

The Change

The solution identified over 1,300 physicians with a high probability of decline in the prescribing behavior. The analysis revealed a \$105 Million annual revenue opportunity that could be achieved with the appropriate sales and marketing intervention to these physicians.

To make the most of the opportunity, personas were created based on the drivers for each physician segment. Also, physicians' overall prescription volumes were overlaid to further prioritize the selection of the physicians for targeting.

The company received specific recommendations to achieve the desired impact, including increasing penetration during a call by connecting with multiple stakeholders, customizing detailing message to focus on solving for reimbursement issues, and ensuring that call detailing also involves effective co-pay card distribution.

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