Healthcare & Life Sciences

Develop prediction framework to address high attrition

The Big Picture

Wholesale drug distributors have experienced strong competition and consolidation leaving only a few surviving entities to service most of the US market. A leading distributor of drugs to long-term care facilities was losing business to competitors over the last several quarters. The hypothesis was that facilities were leaving for addressable reasons such as poor response times, inaccuracies in executing orders, or delays in addressing customer complaints. The organization wanted to understand the drivers of attrition and proactively identify at-risk accounts to develop effective retention strategies.

Transformative Solution

The solution proposed that the organization maximize the total lifetime customer relationship value, with the first phase focused on determining the drivers of attrition. Involuntary attrition related to the organization terminating the relationship or closing a facility was not included in the initial scope.

To understand drivers of attrition and predict the observed attrition behavior, over 40 hypotheses were developed to identify likely churners, including facility and pharmacy characteristics, customer service, account management details contract information and billing data. The definition of attrition was defined separately for each segment – for Skilled Nursing Facilities, attrition was defined as cancellation of the contract, whereas for Assisted Living Facilities, attrition was defined as a significant drop in prescription volume.

A variety of machine-learning techniques, including Gradient Boosting Machine and Random Forest, were used to build advanced predictive models. The current profitability was considered in prioritizing facilities for retention with a segment-specific intervention strategy based on the drivers of attrition, which varied significantly across high-risk segments.

Based on the analysis, the following insights were provided to address customer pain points:

- Facilities served by pharmacies with high clear time percentages and high satisfaction scores attrite less

- Facilities that experience calls with high average speed of answer (ASA) and a high rate of abandoned calls attrite more

- Facilities with a high number of active months in the past 12 months attrite less (active months are the ones with non-zero script volume

The Change

As a result of the predictive analytics solution, $45MM in revenue opportunity was identified by retaining profitable facilities:

- An estimated $40MM in potential of revenue could be saved through retention targeting of 40% of skilled nursing homes
- $5MM in revenues could be saved by targeting Assisted Living Facilities

In addition, the ability to ensure high service levels through close monitoring of drug supplies, customized kiosks for easy order placement and locating pharmacies in close proximity to facilities can significantly improve retention.

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