

Mastering Member Churn

How a predictive analytics model helped a major southern payor prevent member attrition and retain revenues.



AMITECH

Amitech builds a predictive model to target plan members likely to defect, enabling proactive responses by insurers.

A major southern healthcare payor uses a member churn model and intervention to combat rising costs of attrition in the individual markets.

Facing a Growing Threat

In the post ACA era, the rapid expansion of the individual insurance market has increased the risk of member churn significantly. As members who bear personal costs of their policy, they have proven to be understandably more price-conscious and therefore more susceptible to churning. According to the latest Current Population Report from the U.S. Census Bureau, over one in five Americans changed their health insurance over the course of the last year. Among those with “direct-purchase” policies, the figure was nearly 60%. Given that recent Gartner research suggests nearly 80% of a company’s future revenue comes from only 20% of existing customers, it is clear that accurately predicting when a member is about to leave a plan is becoming an important part of the individual insurance business model.

Executive Summary

To address an increasingly challenging rate of member churn on the individual insurance market, a major southern payor came to Amitech looking for a solution that would help them identify at-risk members and target them via strategic interventions at critical moments in the renewal process. Using proportional hazard models, Amitech ultimately developed a comprehensive Member Churn Predictive Model that both accurately identified at-risk members and served as a useful tool for proactive analysis in ongoing operations.

Project Benefits

Better Risk ID

Amitech’s proprietary member churn model accurately identified multiple actionable indicators that significantly impacted churn risk.

Reduced Churn

Recommendations based on Amitech’s risk analysis led to proactive interventions with members determined to be most at-risk.

Retained Revenue

With strategic intervention measures in place to target accurately identified at-risk members, valuable retention revenue is more stable and protected.

The Challenge

A major southern payor was facing the challenge of high member churn and wanted to use predictive analytics to determine months prior to the renewal of their policy if members had a high probability of leaving. Their interest in determining the predictors of churn behavior would allow them to proactively target at-risk members through marketing intervention. The purpose of the project was to identify various predictors of members' churn behaviors for their Individual and Medicare Advantage products.

The Solution

In order to understand the drivers of member churn, Amitech used proportional hazard models to investigate various identifiers and isolate predictors through survival analysis.

The findings included multiple actionable indicators that significantly impacted churn risk.

The tradeoffs of the following covariates shown in Figure 1 helped to understand members' churning behavior.

For example:

- On average, the odds of churning were reduced by 8.5% when subscribers who had claims in more than one category (e.g. medical claim plus Rx claim)
- When a third claim category was added, it reduced the odds of churning by 19%
- Older subscribers were identified as less likely to churn. With each additional year in age, odds of churning dropped 7%
- The more overall claims a subscriber had, the less likely they were to churn, as seen in Figure 2.

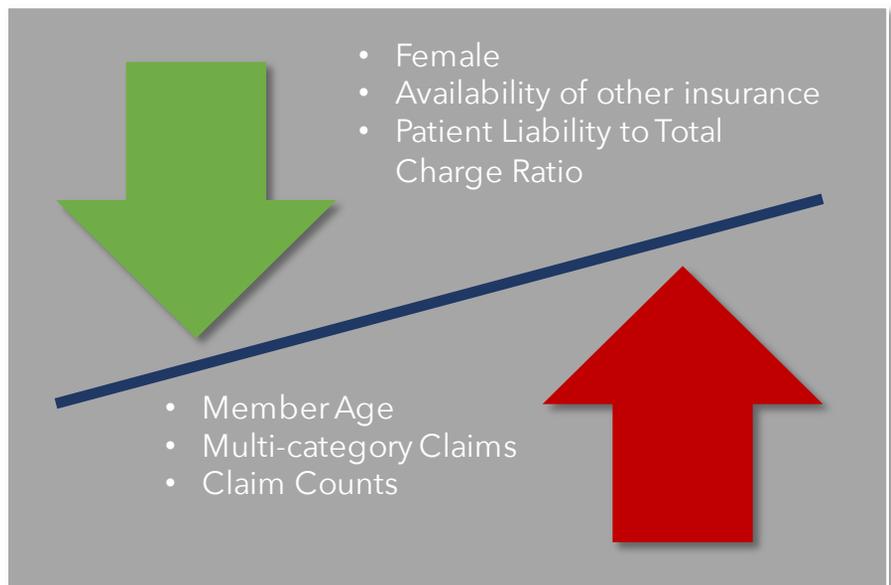
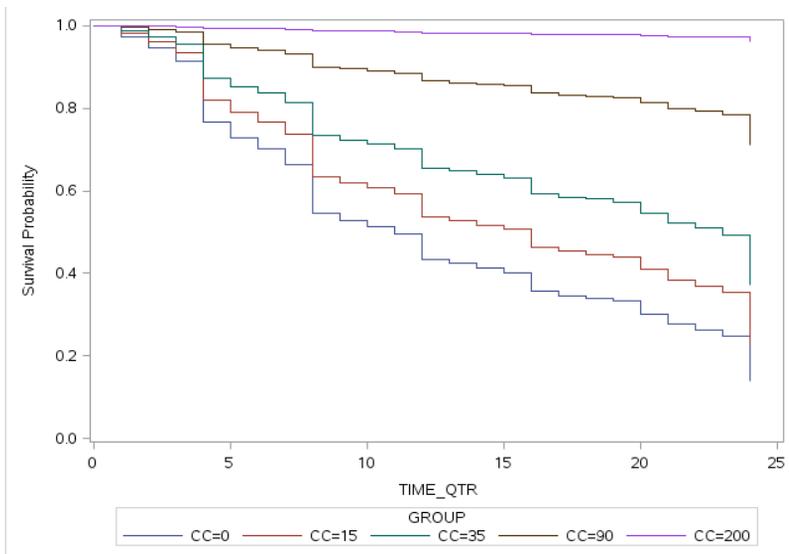


Figure 1. Predictors of Member Churn



Another example was that the more claims the subscriber had, the less likely they were to churn. When a subscriber had 200 claims, it was almost certain that they would stay with the company (survival probability is almost 1).

Figure 2. Survival Probability for Claim Count Groups

In addition to the effects of various covariates on the churn rate, another interesting observation was the “learning effect” of the first one or two years. Especially the first year, subscribers were likely to observe their insurance usage level and categories. That explains why the client saw especially high churn rates by the end of the first year after the subscriber joined.

Amitech ultimately created a comprehensive Member Churn Predictive Model that the payor could use for proactively predicting churn for its individual and Medicare Advantage markets.

Recommendations

Beyond designing and building the analytics model, Amitech also offered several recommendations to the client. Based on the analysis, it was suggested that the payor should:

- Spend more marketing dollars on female subscribers since they generally have higher probability of churning after the first year of being a member
- Spend less on heavy users as it indicated a higher relationship bonding with the firm, or that the subscriber had pre-existing conditions that prevented them from switching
- Develop initiatives that would encourage subscribers to use more than one line of coverage, such as adding Rx to Medical
- Incorporate marketing spending information, especially at individual member level for further refinement of causality

Results

Based on the churn model recommendations from Amitech, the client determined they would spend more marketing dollars on female subscribers since they have higher odds of churning than the male subscribers.

In addition to identifying the predictors of churn within their member base, they were also able to determine the survival probability of each individual subscriber in future periods.

It provided them the opportunity to rank order members to identify the potential churners and where the company should spend marketing dollars to prevent member cancellation.

Although the payor does not publicly disclose specific details on their progress, with the new insights generated, the company reported significant increases in their ability to reduce risk, lower member churn and retain revenue.



About Amitech

Amitech is a leading healthcare data analytics and management consulting firm. We help our clients to manage and extract actionable insights from their data assets. With timely, trusted information, our clients are empowered to make fact-based decisions and are better able to plan and predict to seize new business opportunities, contain costs and improve patient health.

For more information

Contact us at 866-870-8920 or visit us at www.amitechsolutions.com