SOFTHEON

ACA Predictive Analytics Report

Examining 2021 Billing and
Enrollment Data to Accurately
Predict Terminations and
Inform Retention Strategies

EXECUTIVE SUMMARY

▶ To better understand Affordable Care Act (ACA) enrollment trends, Softheon created a predictive model using machine learning (ML) to analyze its 2021 billing and enrollment data, pinpointing key risk factors for individuals.

▶ The predictive model focused on the payment behaviors and enrollment data likely to result in a lapse due to non-payment, predicting member terminations with 80% or greater accuracy across multiple testing scenarios.

▶ This insight will provide health plans with early indications as to who might lapse on their health coverage and offer the opportunity to implement retention strategies for at-risk members.

As 2021 open enrollment ends during the third year of the COVID-19 pandemic, millions nationwide remain uninsured. Early estimates from the Centers for Disease Control and Prevention (CDC) indicate 9.6% of U.S. residents, or 31.1 million people, lacked health insurance during the first six months of 2021. Many widely documented factors contribute to this disparity, especially the high cost of care.

The Affordable Care Act (ACA) provided a stepping stone for millions more U.S. citizens who would otherwise be priced out of the marketplace to enroll in health care coverage. We still have a lot to learn about why and how Americans stay enrolled in ACA coverage. By leveraging ML to examine a large data set of health plan member enrollments and billing, Softheon accurately predicts individuals who will stop paying for health insurance within the plan year and what steps health plans can take to intervene.

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Creating a Predictive Model with 2021 Plan Year Member Data

Serving eight state agencies and more than 90 health plans, Softheon has a unique view into enrollment and ongoing billing and payment information for the millions of members who shop, enroll, or pay bills on Softheon's platform.

To better understand ACA enrollment within the industry at large, Softheon conducted a study comparing member payment, and grace period data from the first three months of an individual's plan year to accurately predict which plan members will terminate their coverage due to nonpayment.

This analysis examines a subset of carrier data across Softheon's health plan carrier customers, focusing exclusively on exchange plans with accounts that experienced a grace period of any length.

These insights can help organizations better facilitate health insurance shopping, enrollment, and billing.

How the Predictive Model Works

Softheon's model predicted coverage lapes with 80% or greater accuracy across multiple testing scenarios. Softheon trained the model on a random sampling of the majority of the 2021 plan year, then tested the model on the remaining 2021 plan year data.

The predictive model identified individuals who would terminate coverage throughout the remainder of the year at the third month of their membership, based on a number of factors identified at enrollment and in their payment history.

The predictive model used ML to examine the billing history and enrollment data of 75% of the 2021 plan year's membership, focusing on which payment behaviors and enrollment data was most likely to result in a lapse due to non-payment. Once trained, the ML algorithm focused on the remaining 25% of member's first three months of billing data, ultimately predicting who would let their insurance lapse throughout the rest of the plan year.

The model identified that **19.5%** of the members in the 2021 plan year data were at-risk for termination due to nonpayment. The at-risk membership represented **67%** of terminated member accounts in 2021.

Members in the 2021 plan year data were at-risk for termination due to nonpayment
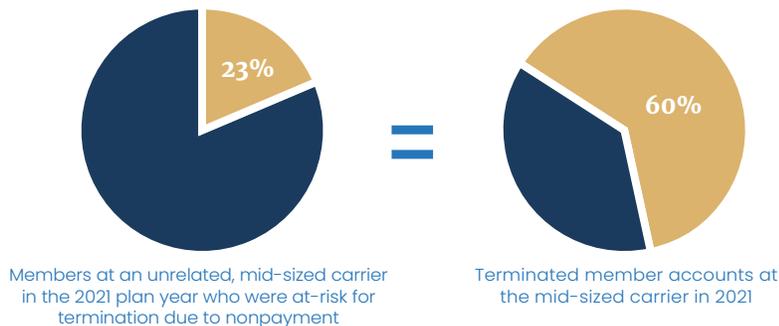
Terminated member accounts in 2021
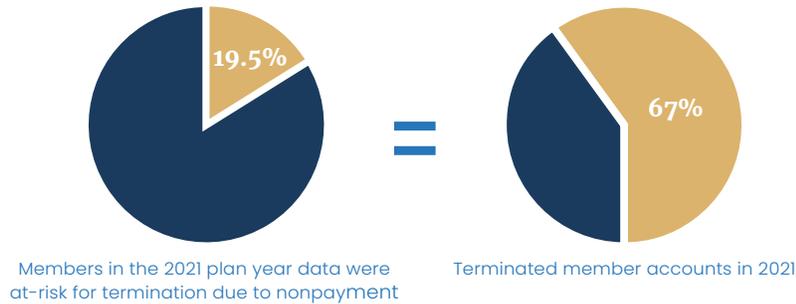
In summary, the predictive model illustrated that carriers could target one-fifth of their membership for early or ongoing interventions and in doing so, intercede in two-thirds of all terminations.

By focusing intervention efforts solely on at-risk individuals, health plans can enable better member retention and overall ROI while minimizing operational spending and workload. Moreover, this level of insight can help inform more innovative outreach and intervention tactics by health plans to ensure at-risk populations do not lose their health coverage. This is especially critical amidst the ongoing COVID-19 pandemic, thereby increasing health equity and ensuring that individuals from underrepresented groups have access to care when they need it.

Leveraging the Data to Inform Member Interventions

When utilized on a mid-sized, regional health plan's 2021 plan data, which was excluded from the original training data set, Softheon's predictive model maintained 80% or greater accuracy. In this case, Softheon identified that **23%** of overall members were at-risk for terminations due to non-payment of premiums. These individuals represented nearly **60%** of the total members that terminated later in the 2021 plan year.

Members at an unrelated, mid-sized carrier in the 2021 plan year who were at-risk for termination due to nonpayment

Terminated member accounts at the mid-sized carrier in 2021

This critical insight is useful in providing health plans with early indications as to why individuals might lapse on their health plans. Once these lapses are identified, health plans have the opportunity to intervene before the member becomes disenrolled, reducing terminations and increasing health equity overall.

Five Methods for At-Risk Member Interventions

1 **Autopay**—Not only offering but heavily promoting an autopay option for monthly, recurring payments may reduce the number of members who expereince a lapse in their health insurance coverage.

2 **Cash Payments**—Allowing members to make cash payments at locations convenient to them, such as pharmacies, enables those who may be unbanked to pay their premiums on time.

3 **Payment Plans**—Payment plans have also been used to help members maintain coverage because those experiencing a financial hardship or life event can pay over a period of time instead of going through the standard grace period that ultimately ends in disenrollment.

4 **Premium-Reduction Incentives**—Offering incentives like premium reductions for individuals who take health risk assessments may help members stay enrolled while also helping health plans obtain valuable health data that can inform future needs.

5 **Better Communication**—In addition to other methods such as email and paper communications, text notifications provide another channel to reach members for payment reminders and other intervention methods.

The Longevity and Flexibility of the Predictive Model

Softheon's predictive model has proven to be both relevant and accurate throughout multiple plan years.

After testing the model against 2020 plan year member data, the model maintained 83% accuracy despite initial disruptions from COVID-19 in 2020 and the unusual circumstances of the Special Enrollment Period in 2021, a long period of open enrollments where higher payment subsidies were introduced.

Testing the model against the 2020 dataset identified that **15%** of members were most at-risk for coverage lapses based on the information gathered during the first three months of the 2020 plan year. That group went on to represent **44%** of the total terminations in 2020.

Members in the 2020 plan year data who were at-risk for termination due to nonpayment

Terminated member accounts in 2020

Considering the vast number of differences between enrollment data from 2020 to 2021, including changing federal regulations, the predictive model was consistent in rendering meaningful results that mirrored market trends and provided insight into how to effectively intervene.

Softheon plans to broaden the model to make predictions at time of signup and the six-month timeframe to continue further training and developing the model to provide more detailed insights.

Preparing for Future ACA Trends

The past few years have been incredibly challenging for the healthcare system and required a shift to quickly address changing patient needs. Moving into 2022 and beyond, it is critical to address oncoming changes and shape the way the health insurance industry responds.
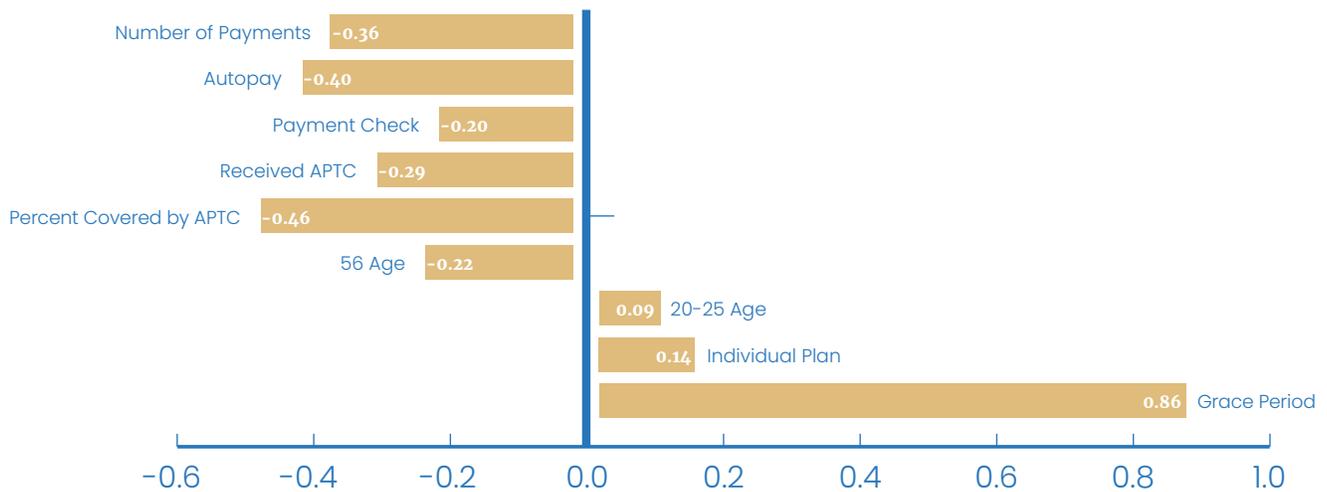
To address the widening gaps in care, organizations in the ACA Marketplace must take steps to keep members insured and quickly identify intervention strategies if they are at risk of lapsing.

At Softheon, we remain steadfast in our commitment to empowering the system with innovative, creative interventions in partnership with carriers to help at-risk populations maintain their health insurance coverage.

Moving forward, Softheon will continue to report out data from the predictive model on a regular cadence, as well as analyze the results of the interventions that health plans made because of the data findings.

# Factors that Contributed to Lapses in the 2021 Enrollment Data

The predictive model consists of member account holder enrollment data and behaviors that influenced future lapses. Over 25 different factors were examined, and these had the strongest impact on the predictive model:

Factor	Value
Number of Payments	-0.36
Autopay	-0.40
Payment Check	-0.20
Received APTC	-0.29
Percent Covered by APTC	-0.46
56 Age	-0.22
20-25 Age	0.09
Individual Plan	0.14
Grace Period	0.86

The following graphs depict the degree to which some of the factors included in the ML model varied from the average lapse rate across the entire 2021 plan year (11%).

Subsidies

Members receiving subsidies lapsed at a lower rate compared to those who paid their premiums out-of-pocket. The affordability that subsidies bring to members may reduce the possibility of experiencing lapses in coverage.

Lapse Rate – Subsidies

| Receiving Subsidies	Complete Self-Pay
9%	19%
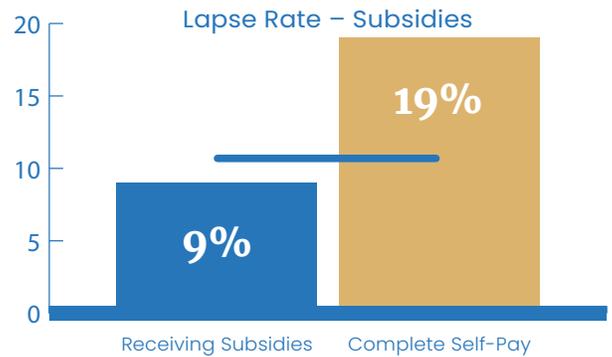
Plan Type

Members enrolled in a silver plan experienced the lowest rate of coverage lapse compared to other tiers. The recent expansion in the availability of advanced premium tax credits (APTCs) and benchmark plans means more members in the silver tier are receiving subsidies, which may contribute to the lower lapse rate.

Lapse Rate – Plan Type

| Bronze	Expanded Bronze	Silver	Gold
14%	12%	9%	12%
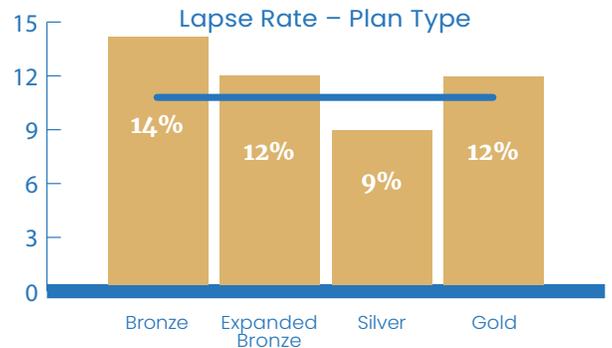
Autopay

Only 4% of members enrolled in autopay experienced a lapse in coverage compared to a 14% lapse rate for those who did not automate their payments. Analysis revealed that members not enrolled in the autopay functionality contributed to over 90% of the total lapsed population in the 2021 plan year.

Lapse Rate – Autopay

| Autopay	Manual Pay
4%	13%
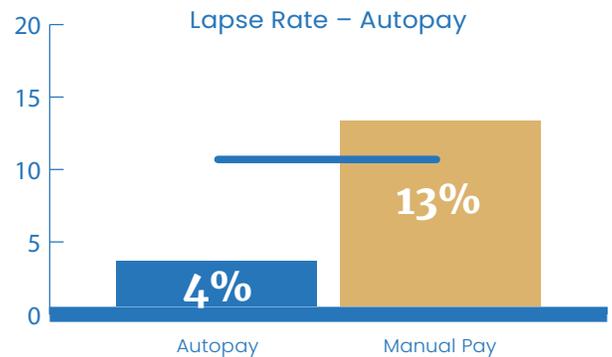
Payment Types

Various payment types saw drastically different lapse rates. Those who paid online, over the phone, or with a credit card experienced a higher-than-average lapse rate. Comparatively, members who paid with their bank account electronically (ACH) or paid via check lapsed in their coverage at a significantly lower rate.

Lapse Rate – Pay Type

| Online	Phone	Check	ACH	Credit Card
16%	12%	5%	7%	13%
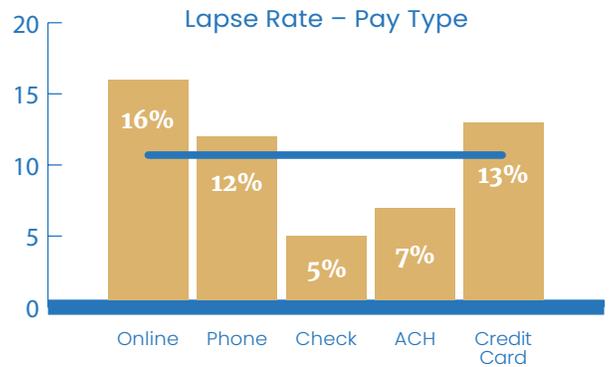
Credit Card Types

Credit card type impacted coverage lapse rates. MasterCard and Visa were above average. While Softheon collects payments from Discover card users, there were not enough in the dataset to be considered statistically significant; Discover users were below the average lapse rate.

Lapse Rate – Credit Card Type

Credit Card	American Express	Master-Card	Visa
13%	11%	14%	13%
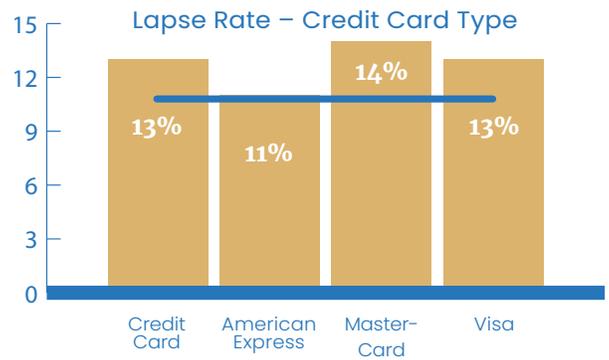
Number of Members

Individual plans proved to be at a higher risk of lapsing compared to family plans. Those responsible for the health coverage of family members tend to take a more proactive approach to payment.

Lapse Rate – Number of Members

Individual	Family
12%	8%
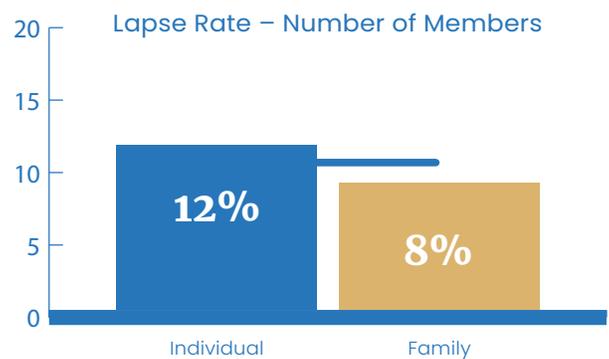
About Softheon

Founded in 2000, Softheon's Software-as-a-Service (SaaS) and Business Process-as-a-Service (BPaaS) solutions solve complex operational and service challenges for health plans and government health agencies.

By offering modular solutions designed to integrate with existing systems, Softheon reduces administrative burdens by streamlining critical processes in healthcare. Softheon's rapidly adapting technology and agile approach to implementation enables clients to proactively respond to changing regulatory environments and consumer demand.

Softheon has been recognized as a leading SaaS and BPaaS provider by IDC, AHIP, ACAP, and HCEG. Trusted by CMS and 8 State agencies, Softheon's clients span multiple industries. In 2021, Softheon ranked on the Inc. 5000 regional list for fastest growing companies, and Best in Biz Awards named Softheon one of the top Companies of the Year in the Northeast Region.

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