

# Predict Health



Case Study

## “Whole Person” AI/Analytics Improves Outreach Effectiveness

Case Study: Measuring Predict Health’s  
Impact on Increasing Member  
Redetermination Rates

# Predict Health

Applying a “Whole Person” Analytical Approach and Proprietary non-Plan Member Data To Increase Redetermination Rates

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# EXECUTIVE SUMMARY

It is widely accepted that many factors beyond purely medical aspects determine healthcare outcomes. These social, environmental and behavioral factors (i.e. **determinants of health** such as income, housing, mobility, diet, exercise, etc.) often play a large role in identifying health risks, predicting the likelihood of successful treatments and controlling cost. Employing such data, **predictive analytics** – the ability to study large data sets to identify emerging trends and patterns – can help organizations find solutions that improve patient acquisition and retention, enhance engagement and provide affordable care.

Working with Predict Health<sup>1</sup>, our client – a Medicaid Accountable Care Organization in Massachusetts with about 100,000+ members – was able to significantly improve their **Medicaid redetermination rates**. In this case study we demonstrate the ability of predictive analytics as a valuable tool for managing and improving membership redetermination or re-enrollment outcomes.

<sup>1</sup> <https://www.predicthealth.ai/>

# BACKGROUND

## Accountable Care Organizations

Accountable Care Organizations – ACOs – are medical care providers (doctors, hospitals, and other agencies) who cooperate to provide quality care to Medicaid and Medicare patients. By coordinating their care, ACOs aim to achieve savings for these federal programs and, in turn, profit from a portion of such savings. ACOs are rewarded for the efficiency and effectiveness of care provided. It is measured, among other factors, on the basis of improved treatment outcomes, decreased rates of hospital readmissions and emergency care visits. The expectation is that such value-based care reduces costs for providers while offering better care for individuals and improving the overall health of the served community.

While this offers a potential for greater savings and hence greater revenues for the ACOs, there are challenges as well. An ACO must actively court, engage and maintain its members – the patients in the communities it serves – while ensuring that they participate diligently in preventative care, adhere to treatments & follow-ups to be able to meet the federal performance metrics that guide its existence. These challenges can be even harder for ACOs that participate in Medicaid, as the communities they serve are typically economically disadvantaged, often transient and with underserved minority populations.

## Medicaid

Medicaid's strict eligibility criteria result in members having to renew their eligibility for the program every year – a process called **redetermination** – to re-enroll and maintain coverage. Re-determination requirements vary by state and may include criteria beyond income eligibility. As Medicaid eligibility is based on household income, it must be verified each year. While this can be automated in most cases, where such data is readily available from taxes or other records, some states require participants to requalify if any data has changed or is missing.

Many such participants find the process of collecting and providing the necessary documentation cumbersome or difficult and allow coverage to lapse. ACOs could therefore potentially lose thousands of patients annually. For ACOs with already thin margins, such losses can determine their viability. And overall health outcomes in the served community suffer, as such lapsed patients miss out on the benefits of continuity of care and seek treatment only when a serious health condition emerges.

This case study shows how our client – a Managed Care Medicaid ACO in Massachusetts – was able to improve their Medicaid re-determination rates by using Predict Health's analytics tool to target patients most likely to have difficulty renewing their coverage.

# CHALLENGES

## Our Client's Challenges

Our Client is an ACO comprised of 15+ federally qualified health centers (FQHCs) geographically dispersed across Massachusetts, serving a diverse population with a high concentration of Medicaid patients. While all of our Client's FQHCs primarily serve low-income, underserved, and an increasingly diverse populations, each region of the state with an FQHCs present has distinct demographic characteristics with unique physical health, behavioral health, social and functional needs.

Our Client noticed the problem of **member retention**, mainly losing Medicaid recipients unable to complete their **annual redetermination**. Naturally, this translated into significant revenue loss each year and reduced potential to meet a corporate strategic goal of member growth. The figure below shows the redetermination rate for one measurement period, the second half of 2018, using ~18K members flagged for redetermination out of the ~100K total membership.

### Baseline Redetermination Rate (April 5, 2019)

Average redetermination rates between 6/15/2018 and 12/28/2018

**69.8%**

Prior to working with **Predict Health**, our Client's FQHCs would typically contact the members who were found to require redetermination via a phone call, albeit in no specific order or schedule. This "one size fits all" approach did not account for the fact that not all members requiring redetermination would need the same amount of help – some required minimal help while others needed extensive hand-holding throughout the process. Certainly, a more **targeted approach** was required if our Client were to improve on these retention rates using its finite member outreach resources.

# OPPORTUNITY

## Predict Health

We, at Predict Health, identified a data-driven opportunity to help our Client increase its member redetermination rate. Veritably, our data and analytics (using AI and machine learning) driven **member acquisition and retention platform** is designed, among other features, precisely for such tasks.

Our acquisition and retention platform is built on our **Behavior Signatures® database**, which contains **5+ years'** worth of longitudinal data – scrubbed, refreshed and ready for analysis – on **260M+ identified US adults**, containing over **1,300 non-clinical factors** per person, many of which contribute to their social determinants for health (such as mobility/transportation, food and housing insecurity, etc.).

When combined with basic member data including previous engagement information, we can identify and predict a variety of outcomes for an individual member such as



**Business outcomes:** for example, the likelihood of re-enrollment, missing the enrollment window, changing providers, using in-network or out-of-network providers and many more



**Clinical outcomes:** such as the likelihood of missing appointments, following through on treatment plans, social factors causing stress that affect treatment, re-admittance, etc.

Leveraging this data-driven approach, to deliver member care & support, targeted to individuals, our customers increase their acquisition and retention, and identify specific actions that can improve their outcomes.

# METHODOLOGY (1/2)

Our Client turned to us for a data-driven approach to precisely identify those members who required **high-touch support** during the re-determination process.

## Scientific Process

As with every statistical study, the efficacy of a procedure or treatment can be measured by comparing the differences in outcome between a control (or untreated<sup>4</sup>) group and a treatment group. For our study, which was to statistically compare a targeted outreach towards those members most likely to need help in the redetermination process to a baseline cohort subjected to the existing outreach, a natural control group arose from about half of the FQHCs that chose not to participate.

These FQHCs continued their normal outreach practice. That is, the patients requiring redetermination in these FQHCs were “treated” exactly as before – a reminder call where possible and no change in approach. The other of our Client’s FQHCs participated in Predict Health’s study.

## Predictive Analysis

Our Client had an overall cohort of 7,709 members spread across all 15+ FQHCs eligible for redetermination during the period 9/10/2019 to 10/31/2019. Our study scored these 7,709 members across many factors – both individual and social – to identify a cohort that was most likely to benefit from outreach. This scored list was made available to all FQHCs, with the understanding that the treatment group would be those belonging to the FQHCs that chose to participate in the study with the rest in the control group.

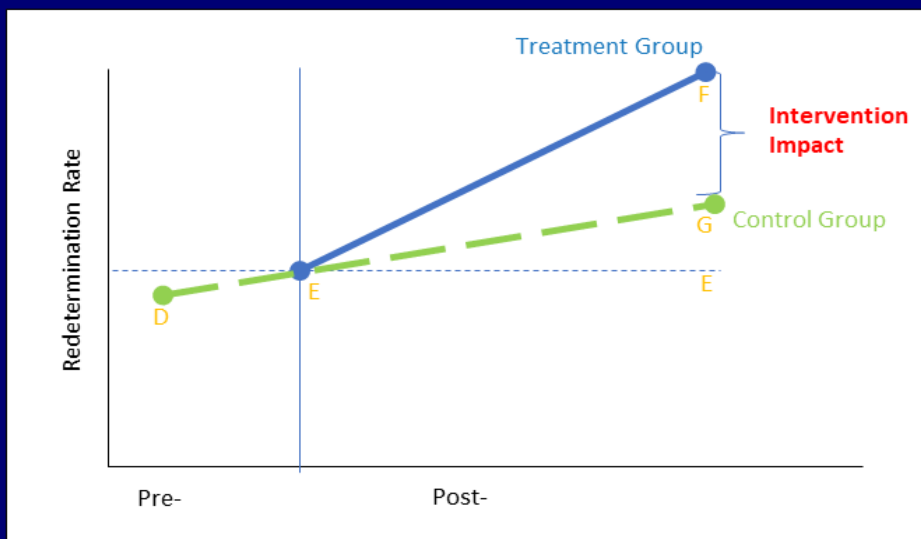
## Systematic Outreach

The overall study was to see the impact of systematic outreach, where the “treated” members were contacted in a systematic manner using various channels (voice calls, text/SMS) versus the control group members reminded using the current practice described earlier. Our text service partner performed the actual outreach for the treatment group and provided the “treatment” data. Our aim, therefore, was to show our Client the impact of our proposed intervention compared to normal outreach, as shown in the figure on following page.

<sup>4</sup> Either untreated or treated to an earlier or standard procedure to which the new method is being compared.

# METHODOLOGY (2/2)

## Treatment vs. Control Impact Analysis



Statistically compares the redetermination rates in a “Treatment” Group versus a “Control” Group

### Outreach channels

There were two further sub-studies using the scored cohort from the treatment group, to evaluate the **impact of different outreach channels** – text/SMS and voice calls – used to contact the members with a reminder for pursuing redetermination:

1 The **impact of text/SMS**, obviously for those with mobile phones, evaluated the response of cases where the text/SMS was received versus those where the text/SMS was not delivered or the mobile phone was unreachable.



2 The **impact of voice mail**, to evaluate any differences between cases where the call completed versus those that didn't.





# RESULTS

An obvious improvement in redetermination rates owing to the impact of **prioritization, systematic reminders, and targeted outreach.**

The impact on redetermination rate with **text/SMS based reminders**

The impact on redetermination rate with **voice calls/messages as reminders**

We note the higher impact of voice calls/mailed versus text/SMS and attribute it to several soft factors, such as the ability of targets to better focus on the reminder when listening at a time of their choosing.

The study clearly shows an **overall improvement of 4.5%** in the redetermination rate as a result of targeted outreach to the members predicted by the Predict Health algorithms as most likely to respond positively to additional handholding. Our Client estimates this improvement as contributing approximately **\$2.2M in additional revenues** (based on an average 6% margin) and an ROI of 100x the investment.

## Impact of Systematic Reminders

Calculation of impact as of 12/30/2019

### Redetermination rate for Treatment Group [F]

Treatment group was for Health Centers who participated in the Client's systematic voice and text reminder outreach  
Treatment Group had 2,080 members

**85.0%**

### Redetermination rate for Control Group [G]

Control group was Health Centers who did not participate in the Client's systematic reminder outreach; they continued to receive scored files and did their own outreach  
Control Group had 2,707 members

**80.5%**

**Impact: Change in Redetermination Rate due to Systematic Reminder Outreach [F-G]**

**4.5%**

## Impact of Text/SMS Reminders

Calculation of impact as of 12/30/2019

### Redetermination rate with Texting/SMS completed [F]

Treatment group was for members where messages were sent and received (Text Sent, Text RCVD, Cancel SMS, Confirm SMS and Resched SMS messages)  
Treatment Group had 1,940 members

**84.7%**

### Redetermination rate for same HCs with no Text/SMS [G]

Control group was where text messages were undelivered  
Control Group had 506 members

**81.0%**

**Impact: Change in Redetermination Rate due to Text/SMS [F-G]**

**3.7%**

## Impact of Call Reminders

Calculation of impact as of 12/30/2019

### Redetermination rate with Voice Calls completed [F]

Treatment group was for members where calls were made and received (Ans Machine, Cancel, Hang Up, No Answer, Transfer, No Response)  
Treatment Group had 140 members

**88.6%**

### Redetermination rate for same HCs with no completed calls [G]

Control group was where calls did not reach member – calls were undelivered or we did not have contact information  
Control Group had 535 members

**82.1%**

**Impact: Change in Redetermination Rate due to Voice Calls [F-G]**

**6.5%**

6 This included answered calls, voice mail recorded, hang up, no answer, call transfer, or no response.

# Predict Health



## About Predict Health, Inc.

Predict Health, Inc., a Northern Virginia company, helps health plans identify, connect and engage meaningfully with their members, increasing member delight and accelerating plan growth.

**Predict Health's Behavior Signatures®** are leading indicators and behavior markers – built off Predict Health's unique “Whole Person” member view including member and patient preferences, social determinants of health and non-clinical health data – that enable unprecedented precision in targeting and engaging patients at each point in their decision journey.