

CASE STUDY

Cardinal Analytx Solutions

Executive summary

At Premera, we're pushing to innovate more than ever before. Our ultimate goal is to create transformative solutions that will have a substantial impact on our business, but to get there requires experimentation—one way Premera does this is by utilizing collaborative partnerships with fast-moving start-ups who can rapidly iterate their products to see what works and what doesn't.

Whether successful or not, each of these iterations are opportunities to learn. The resulting knowledge and experiences can lead to unexpected breakthroughs, concept programs and prototypes that improve our customer's lives and make healthcare work better.

Here, we'll talk about how we're exploring predictive analytics and machine learning through our partnership with Cardinal Analytx (CAS).

Introduction

The concept that a small number of people typically account for the majority of healthcare costs in a population is well understood in our industry. Research at Stanford has narrowed this a bit, showing that in any given year, approximately 10% of the population accounts for 70% of costs. What's interesting is that the makeup of this 10% segment can shift significantly from year to year; typically, less than half of the people in that category have chronic illnesses or costs that consistently keep them there. That means more than half of the people in the 10% segment each year were not in it the year before.

With this in mind, our team began to explore predictive analytic techniques to determine which people are most likely to move into the 10% in any given year. If we could identify these members beforehand, we could seek to work with these patients to ensure they are receiving the care they need as soon as possible and hopefully staying as healthy as they can be.

The challenge

These predictions take a great deal of effort, but they are possible, thanks to new techniques in big data and predictive modeling deployed on the information Premera has available through processing claims. However, that is only the first step. As we continue to experiment, we have found that the outreach and intervention process, which attempts to show members the value of becoming more engaged in improving their health, continues to be difficult. It also necessitates some new approaches, given the use of these new identification techniques.

Here's how it works: With the help of CAS, we identify a member who appears to be at risk of a significant increase in their medical needs. This identification is driven by the interaction of over 50,000 different variables processed into an algorithm that predicts an individual's expected healthcare costs. From that, we can create a list of the highest-risk members.

The Cardinal Analytx clinician team then examines the situation and puts together an action plan. This is passed to Premera's care-management team, who can contact the member and try to find ways to address the need. If a potential issue is driven more by gaps in clinical care, we take a different approach: A Premera medical director will review any clinical-oriented analytics

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and engage the member's physician to collaborate on member outreach and intervention. In the future, we intend to work directly with physicians to evaluate if patient engagement improves through this method.

Customizing new technologies to our specific data sets is a new level of healthcare innovation—and by working with a nimble partner such as CAS, we're able to leverage their specialized skills to bring these new solutions to market. Phil Colmenares MD, SVP and Chief Medical Officer, Premera Blue Cross, explains the benefit to his organization, “Our partnership with Cardinal is helping us explore new ways to improve our evolving population management approach. With Cardinal, we are identifying a different set of patients to outreach to in order to support their care experience. Testing new approaches and learning from that work is important in order to bring new and innovative solutions that add value for our members.”

This is only the beginning of our test-and-learn process; the project likely will continue for a few years. We are trying different engagement models and patient-outreach strategies, working to measure the impact on outcomes and cost, all the while collecting valuable data that will help us find better ways to co-design programs and initiatives with our partners.

An unexpected benefit

Our work already has uncovered another potential use for the predictive analytics. Now that we have a greater understanding of how to predict which individuals are at risk, we are trying to expand this to predict risk at a group, subgroup or line of business level.

This was not an original use case for CAS. But when we looked at the results from our initial experiments, we saw another opportunity—by applying the individual model to populations, we have discovered that it is significantly more accurate at predicting risk than the tools Premera currently uses.

This could have distinct benefits for our business. First, we are exploring how we can use this information to be more precise in our group pricing models. Second, the risk-prediction models can help us show our group customers trends in their populations and what the data indicates is likely to happen in

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the future. This gives us a view into a group’s changing health needs. From there, we can consult with them and provide health-management strategies to offset these trends; this potentially would lead to a better experience for members—and a healthier, more productive workforce for our employer customers. Linda Hand, CEO of Cardinal Analytx provides perspective on the Premera partnership, “as a leader in innovative healthcare, Premera is a key partner in helping Cardinal bring new technology to health plans. Premera’s willingness to lean-in and work closely with us has provided Cardinal Analytx with a deep understanding of how health plans work on behalf of their customers.”

The results

While still early, we have some indications that our efforts on the population level might lead to success; however, there’s much work to be done. We have shared some of this work recently with a few of our largest national accounts, and there was strong interest in partnering with us to see if we can build more of this thinking into our programs. There also is a clear willingness to support further experimentation together. We are excited to continue this work in 2019.

Whatever the outcome, though, this is a powerful example about how experimentation can lead to use cases that weren’t seen initially. Something that might not seem like an immediate “win”—trying to predict and prevent costs at the individual level—could eventually turn into something very useful for Premera. That’s why exploration, innovation and collaboration with fast-moving partners such as CAS are so important to our business. Stay tuned, because exciting things are ahead.