How Acme* is Changing the Way They Underwrite Their Business.

MGUs are always looking for new and innovative ways to enhance their bottom line and gain an advantage in a highly competitive marketplace. In this case study we'll highlight how Merit Medicine's predictive AI/ML model is able to help Acme gain that edge.

BACKGROUND

Acme is a Managing General Underwriter (MGU) that offers level-funded and traditional stop loss health insurance plans for small to medium sized businesses. Acme partnered with Merit Medicine from 2023-2024 to see if AI powered predictive analytics could give them a competitive advantage- helping increase both new and renewal RFP conversion rates and underwrite more profitable business.

AT A GLANCE

Challenges

- Predicting future first dollar and high cost healthcare claim spend.
- Determining the right levels of coverage to underwrite at prices that are competitive and profitable for MGUs and their carrier partners.
- Responding quickly, confidently and efficiently to RFPs for new l business, when no prior year claims data is available to them.
- Identifying the optimal levels of stop loss coverage needed by group for an upcoming plan year.

THE CHALLENGE

Traditional underwriting approach used by MGUs in responding to RFPs rely heavily on only a subset of member data, such as a census file, Individual Health Questionnaires (IHQs), the '50% Report', and external databases meant to help quantify future healthcare spend and predict high cost claim events.

For Acme, winning new business often comes down to being able to respond quickly and accurately to RFPs, and Acme needed a solution that could help simplify their process by **accurately** predicting future healthcare spend and high risk claim occurrences - even when no prior year claims data was available.

Not only was Acme's current method of underwriting cumbersome and often times unreliable, it was fundamentally constrained in its ability to anticipate and predict an individuals unique healthcare trajectory.

Merit Medicine's advanced AI and machine learning models enabled Acme to glimpse into the future and more confidently underwrite business at competitive premium rates all while balancing the interests of carrier partners and consultants alike.

> Incorporating Merit Medicine's predictive insights routinely into our business processes for underwriting new business has been a game changer for us. It has been the tool our underwriters have been looking for to more effectively compete in a crowded insurance market and win profitable business.

Josh D.

Chief Underwriting Officer, Acme

THE SOLUTION

Merit Predict 1. Predict High Risk Members and Their Expected Claims Spend

Merit Predict helped Acme* identify future catastrophic claimants 12-18 months in advance, allowing them to confidently set competitive premium rates and maintain their profitability.

Member 4444 Health Status

Patient is an adult male. Their primary diagnosis is atherosclerotic heart disease of native coronary artery without angina pectoris (I2510). They are currently undergoing treatment involving therapeutic exercises, manual therapy, and various imaging procedures including X-rays and computer ophthalmic imaging. They are prescribed medications for thyrotoxicosis, diabetes, and heart conditions. Additionally, the patient has chronic conditions including primary central sleep apnea, chronic atrial fibrillation, and type 2 diabetes mellitus. The patient also has a history of pressure ulcers and difficulty walking.

Health Status 1 2 3 4 5 6 7 > Export to .csv

Member ID	Health Status	Lower Bound Spend	12-month Predicted Spend	Upper Bound Spend
1111	Patient is an adult female. Their primary diagnosis is lateral epicondylitis of the left elbow. They are currently undergoing treatment involving physical therapy, including manual therapy, therapeutic exercises, therapeutic.. View more	$42,062	$46,107	$52,416
2222	Patient is a male child. Their primary diagnosis is contusion of the right hand. They are currently undergoing treatment involving X-ray exams of the hand. Additionally, the patient has a nondisplaced fracture of the base.. View more	$6,233	$9,560	$12,482
3333	Patient is an adult female. Their primary diagnosis is Acute myeloblastic leukemia, not having achieved remission. They are currently undergoing treatment involving therapeutic exercises and are prescribed Ruxolitinib (Jakafi).. View more	$91,932	$127,654	$181,915
4444	Patient is an adult male. Their primary diagnosis is atherosclerotic heart disease of native coronary artery without angina pectoris (I2510). They are currently undergoing treatment involving therapeutic exercises..View more	$144,134	$207,139	$320,830
5555	Patient is an adult female. Their primary diagnosis is lateral epicondylitis of the left elbow. They are currently undergoing treatment involving physical therapy, including manual therapy, therapeutic exercises, therapeutic.. View more	$29,739	$43,650	$52,139
6666	Patient is an adult female. Their primary diagnosis is Radiculopathy, lumbar region. They are currently undergoing treatment involving extremity studies, CT scans, and X-rays and are prescribed levothyroxine and.. View more	$20,177	$21,018	$21,517
7777	Patient is an adult female. Their primary diagnosis is Paroxysmal atrial fibrillation. They are currently undergoing treatment involving extremity studies and CT scans of the abdomen and pelvis with contrast.. View more	$163,078	$176,021	$267,170

Acme used Merit Predict to identify and categorize future high risk members and their associated claim spend for the current and upcoming plan year. This gave them a clear picture of both last year's high risk claimants and predictions for the upcoming year, including confidence intervals.

With this information, Acme was able to make more precise underwriting decisions by accounting for high-risk members' health care trajectories and future claims costs.

Merit Predict 2. Quickly Assess Group Risk and Volatility

Merit Predict gave Acme instant insight into group-level risk and volatility right from the Portfolio Dashboard with Group Risk Score and Coefficient of Variance (CoV) - helping draw attention to the right groups and members for review and pricing decisions.

Group Risk Score: A normalized score that compares a group's predicted per-member annual spend to a benchmark. It indicates how costly a group is expected to be relative to the baseline.

Group PMPY: The group's average predicted annual claims cost per member. It is calculated by dividing the total predicted claims risk by the number of members with a risk greater than $0.

Baseline PMPY: The benchmark used for comparison, such as the industry average (e.g., $5,800). This value represents typical annual per-member spend.

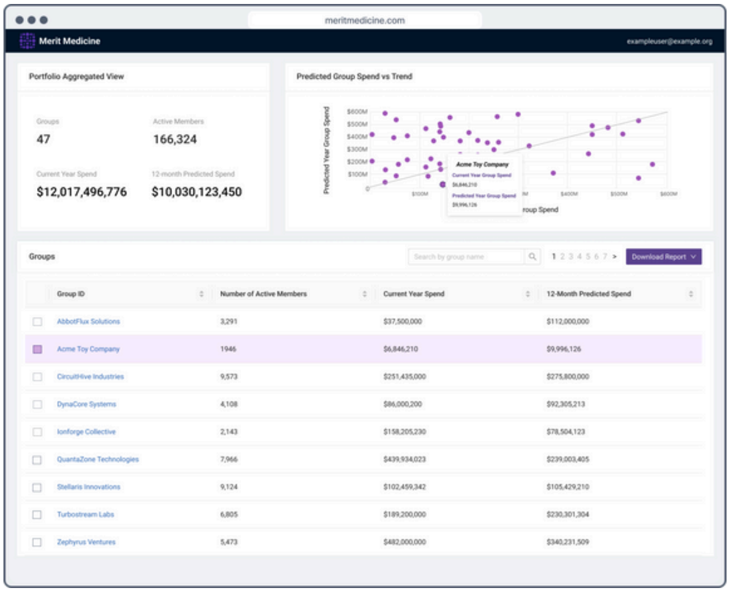
Download Group Report | Download Portfolio Snapshot

Risk Score	Coefficient of Variance
0.65	0.67
2.6	1.29
1.52	0.87
1.76	1.04
1.15	0.49

Why it Matters...

The CoV reveals how risk is distributed within each group and helps spot volatility and high-cost outliers.

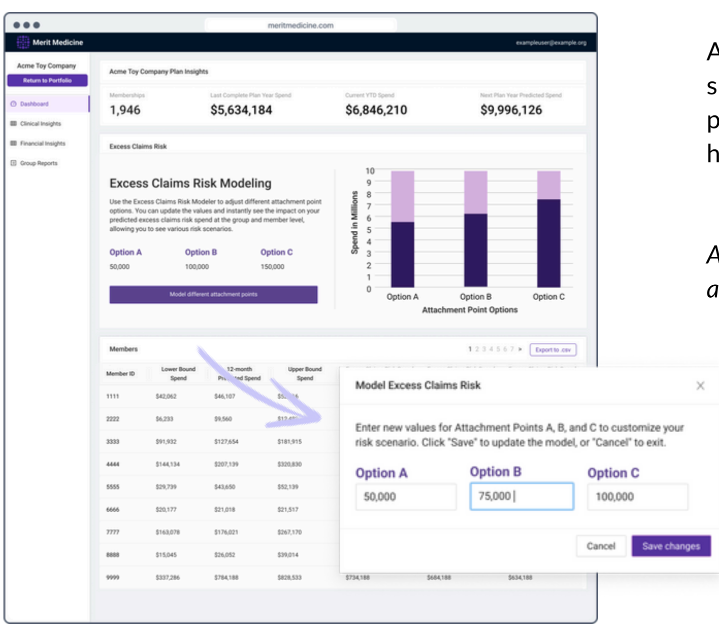
3. Predict Total First-Dollar Claims by Group



Acme was able to leverage Merit Predicts insights to better understand historical claim spend, current TYD spend and predict future spend distribution to better anticipate high risk claimants and respond to RFPs with rates that ensure profitability.

4. Optimize Stop Loss Spec Deductible For Each Group

Merit Predict helped Acme calculate the effectiveness of current Stop Loss policies, and provide recommendations for optimizing ‘future’ coverage and attachment points based upon what Merit Predict is able to determine a groups future healthcare spend will be over the next 12 months.



Acme was able to consider excess claims risk at each specific deductible to ensure they were maximizing profits for themselves and their SL carrier underwriter, helping preserving these key relationships.

Acme’s net savings reflects both a change in premiums and the change in total group claims liability

RESULTS

By leveraging the Merit Predict solution, Acme saw some exciting results that had real impact to their bottom line:

Faster Quote Turnaround: The ability to quickly and accurately determine coverage needs for **new RFPs** led to a **30% reduction in quote turnaround times - reducing the average time from 9 days to 6 -** improving competitiveness and profitability. Acme was also better equipped to determine which business they did not want to bid on, which contributed towards gained efficiencies and improved Loss Ratios.

Enhanced Underwriting Accuracy: Comprehensive insights from Merit Predict's AI/ML predictive models resulted in a **24% reduction in unplanned claim spend** compared to the previous year.

Increase in Net New and Retention Business: A more responsive and competitive underwriting approach contributed to a **5% incremental increase in renewals** and a **2% increase in new sales.**
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Improved Partner Satisfaction: By identifying optimal stop-loss coverage thresholds, Acme was able to understand their client's coverage needs based on the catastrophic risk of each employer group they cover, ensuring more profitable outcomes for Acme and their Stop Loss partners.
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CONCLUSION

Merit Medicine's predictive AI and machine learning model helped to transform Acme's approach to risk assessment and underwriting for their level funded and traditional stop loss lines of business. Unlike traditional methods that struggle to predict future healthcare spend at the member level, Merit Predict can dynamically analyze individual health trajectories and forecast potential claimant expenses with unprecedented accuracy—even in the absence of prior year claims data.

By leveraging predictive analytics, MGUs like Acme can now confidently underwrite policies with greater speed and precision. This approach allows for more competitive premium rates and loss ratios while simultaneously protecting the interests of carrier partners and consultants, transforming underwriting from a retrospective exercise to a forward-looking strategic capability.

REFERENCE

1- Response time was calculated by the number of days on average it took Acme* to quote new business from the time the RFP was submitted until the time it was returned. Calculations were based on data for new business quoted in Q3 2023 compared to response time for new business quoted in Q3 2024.

2- Unplanned spend for 2023 was 76% ('24 / '23) of unplanned spend in 2023, resulting in a 24% reduction.

3- The number of net new and renewals customers won in Q3 2024 compared to Q3 2023.

Disclaimer: The company name used in this case study, Acme, is a placeholder and does not represent the actual name of the organization being discussed. The real company has not yet granted permission for its name to be used in this case study.