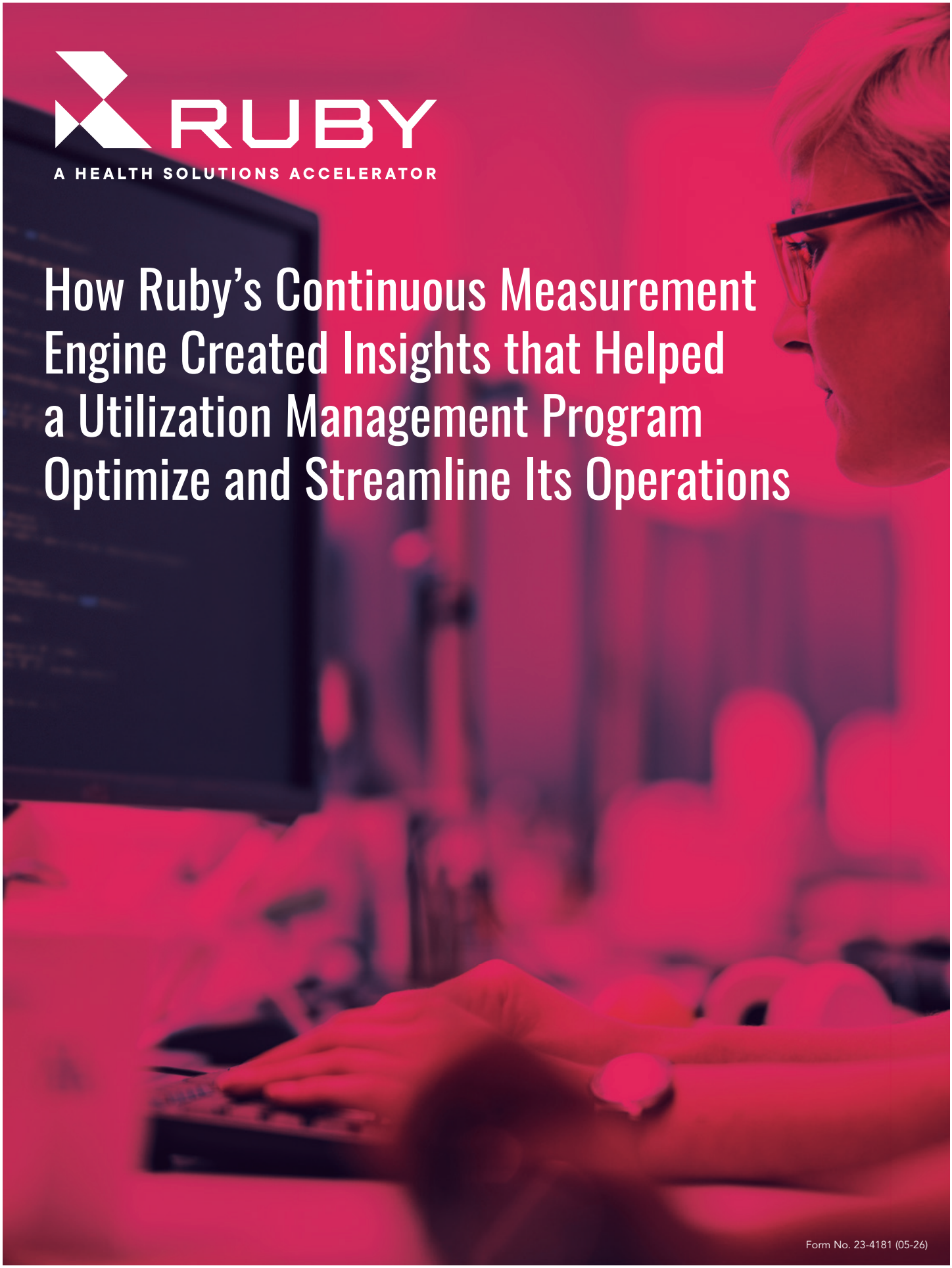
RUBY

A HEALTH SOLUTIONS ACCELERATOR

How Ruby's Continuous Measurement Engine Created Insights that Helped a Utilization Management Program Optimize and Streamline Its Operations



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What is Ruby?

Ruby Analytics is an analytics platform designed to transform how organizations measure performance, uncover insights, and drive better outcomes. Originally developed within Blue Cross of Idaho, Ruby was built to address a core industry challenge: static, retrospective reporting that limits an organization's ability to continuously track and improve performance. Ruby replaces this with continuous measurement, key insights and benchmarking, and predictive analytics – enabling health plans and partners to monitor affordability and manage their portfolio of programs in near real time, identify cost drivers, and make data-informed decisions that improve performance and reduce total cost of care.

Ruby's product suite centers on a differentiated set of scalable, patent pending, market-facing analytics solutions. Its core offerings include Continuous Measurement (automated, ongoing evaluation of program performance and ROI), Predictive Analytics (forecasting future cost and utilization outcomes to enable proactive interventions), Key Insights and Benchmarking (standardized metrics, scorecards and comparative performance analysis), and Analytic Consulting (deep-dive analyses to identify root causes and develop actionable recommendations). Together, these products create a comprehensive analytics ecosystem that moves beyond reporting to actively optimize programs, support strategic decision-making and continuously improve healthcare affordability and outcomes.

Utilization Management program background

A western health plan's Utilization Management program leverages a hybrid of in-house reviews performed by on-staff clinicians and external reviews performed by vendor partners. A governance committee of clinical and operational leadership determines which services require authorization, and whether those reviews will be performed in-house or externally. Prior to Ruby's involvement, the decisions were solely clinical in nature, not taking into consideration whether some reviews drove more value than others.

The opportunity

Benchmarking analysis showed that the plan required authorization on many more services than competitors. Plan leadership launched an initiative to simplify the member and provider experience and reduce the number of services requiring authorization. Analytics were needed to determine which reviews were producing value and which ones were not.

Additionally, leadership called for an independent assessment of vendor partnerships. Vendor partners offered reporting on the savings from their reviews, but their reporting was biased and lacked a robust methodology.

The Ruby solution

Ruby's Continuous Measurement Engine leverages a direct-measurement algorithm to measure utilization management. Because all populations receive utilization management, a true comparison group is not available, and a cohort methodology was not feasible. However, because the program is transactional in nature, Ruby developed a methodology to directly calculate savings for each review performed, down to the individual service level. This approach focuses on robust, comprehensive and accurate estimation of the cost of denying or redirecting services. Unlike the cohort study methodology, which estimates savings across time, this measurement methodology measures savings per instance of action *(per authorization, in this case)*.

This approach allows for:

- A smaller initial data lift *(easier to identify than program participation over time)*
- Simpler and more intuitive savings interpretations
- Measurement, even when a comparison cohort is not available
- Scalability within current measurement infrastructure

Phase 1: Data integration

The Ruby team:

- Gathered utilization management data from the clinical team's population health management system
- Aggregated claims data at the service level
- Defined and calculated algorithmic assumptions, such as using episodic grouping methodologies to identify the impact of utilization management on related services

Phase 2: Continuous Measurement Engine

After gathering relevant data, Ruby's Continuous Measurement Engine tied utilization management outcomes to claims, when possible, and calculated assumptions as needed.

Each following month, the Continuous Measurement Engine recalculated each assumption based on the most recent available data.

With each new month of data, clients can better estimate their utilization management programs and observe trends related to the assumptions used in the savings estimation.

Phase 3: Operationalization

Each month's results are stored at the member level and then aggregated to provide different views, depending on the audience *(market segment level, self-funded client level, etc.)*. Ruby provided savings results into a dashboard where business-area stakeholders could see how their portfolio of programs was performing.

The Ruby solution also updated stakeholders when program savings shifted dramatically. These changes are rare and usually initiate validation verification on potential outliers or edge cases. Additional consulting with Ruby analysts and business areas allowed for more in-depth discussions on details.

Core findings

Through Ruby, business area leaders are validating utilization management volume with its savings.

- More than 47% of all savings come from in-house prior authorization denials related to MSK, gynecologic, ENT and cardiovascular episodes.
- Savings for smaller in-house programs yielded much smaller savings than intended.
- Market segment trends often had disparate savings outcomes based on episode.
- Comparison between vendor-reported savings totals and Ruby savings totals showed Ruby savings were smaller by comparison.

Actionable outcomes

Ruby's results contradicted the vendor's statements that their solution would reduce the total cost of care. This changed how the solution was marketed to clients, characterizing it instead as a member experience program that had some claims impact rather than an affordability solution.

Additionally, business leaders used Ruby's results to help support vendor contracting decisions. They ultimately decided to shift away to a new vendor partner to create a more impactful program.

Having savings results down to the individual service level created an exceptional level of insight for Utilization Management leadership. As such, plan leadership created workgroups to evaluate the data and implement key findings, leading to the following programmatic changes:

After evaluating the full list of services requiring prior authorization, services where the cost to perform the review outweighed the value were removed, leading to hundreds of codes removed from the list. This freed up staff time and resources for other plan programs.

More than 60% of inpatient reviews were identified as low value. Those reviews were either automated or optimized going forward, significantly reducing the amount of staff time required and pivoting the team to focus on higher value reviews.

After reviewing the ROI of vendor partnerships, the Ruby team determined that their tool's measurement of savings was quite a bit lower than the savings reported by the vendor's methodology, revealing areas with a negative ROI. As a result, some service reviews or lines-of-business specific reviews are now done by the plan, not a vendor.

The plan's Utilization Management leadership continues to leverage Ruby's analytics on an ongoing basis, optimizing and responding to emerging trends.