



cogitativo

Finding Value

A true signal in value— disease progression

Healthcare systems have faced unprecedented financial challenges due to the loss of utilization during the COVID-19 pandemic. This reality has highlighted the importance of shifting away from fee-for-service models to value-based care that incorporates capitation in contractual agreements.

To create affordable healthcare products and win the market, payors are increasingly turning toward tiered and value-based care networks, with a focus on ensuring that the rate of improvement in care quality outpaces rising costs.¹⁻³ Provider networks are inextricably linked to both care quality and cost and can therefore be leveraged to optimize value. Data show that network analysis is useful for identifying network features that are associated with health outcomes.⁴

Successfully managing provider networks requires architecting, building, budgeting, maintaining, and monitoring them. Unfortunately, the current approach is antiquated, and network management tools are not agile enough to incorporate unprecedented sizes and types of datasets or to address the growing complexities of the healthcare industry.

BACKGROUND

Patients delayed their routine healthcare during the pandemic, resulting in large financial losses among healthcare systems. Now, these systems are moving toward value-based care that emphasizes provider quality to reduce costs.

UNMET NEED

Our current “value” measurements are limited to process metrics. Furthermore, these methods of analyzing, measuring, and managing provider networks lack the sophistication to measure value; cost plus temporal changes in patient-level disease progression (true patient quality). Creating and maintaining high-performance networks is essential to gaining a competitive advantage. To accurately estimate the value of these networks, the disease progression of individual patients must be measured in addition to the cost.

SOLUTION

Cogitativo has developed a unique machine-learning capability to measure and predict temporal progressions of a patient's disease condition. The gradient of these measurements allows an organized system of care to identify favorable and unfavorable changes in individual patient health conditions. Indeed, this metric enables a more precise, relevant quality of health measurement of a patient. These patients are then attributed to a single or cluster of rendering providers, thereby linking cost and health progression quality, yielding new insights for value-based contracts.

IMPACT

Cogitativo can uncover provider quality, pinpoint health disparities, and guide provider collaboration through the enhanced determination of value combined with the identification of ideal networks. In addition, Cogitativo's network analysis can help healthcare systems understand their patient populations and the extent to which organic provider networks add value.

Organizations struggle to design, implement and monitor network performance

There are several challenges brought forth by new healthcare paradigms, technologies, and market realities that inhibit payors' abilities to develop a comprehensive understanding of networks and both their potential and realized value.

These challenges include:

Lack of quality and cost transparency:⁵⁻⁸

There is enormous variability in cost and quality of care. However, it is nontrivial to determine the specific costs associated with an individual patient's care, and quality metrics are elusive. Without reliable data on costs and quality, payors must develop their own methods for evaluating the value of care provided within networks.

Changes in consumer demands.⁹⁻¹¹

There is ongoing healthcare cost inflation, and consumers face increasing cost share. These economic drivers coupled with evidence that narrower network plans are not associated with lower quality care has led consumers to shift their preferences from broader access to better value. Adoption of complex tailored networks is therefore on the rise.

Provider consolidation:¹² Providers are consolidating across the care continuum. Contracts lack uniformity and may involve individual practitioners, group practices, or entire healthcare systems. Comparisons across contracts are therefore hindered, making it difficult to pinpoint sources of high versus low value.

Advanced network configuration:¹³⁻¹⁸

Multiple network configurations and negotiated rate structures are on the rise, which obfuscates competitive benchmarking of provider rates and renders historical benchmarking services inaccurate for describing medical cost position.

Regulatory complexity:¹ Network adequacy is subject to changes in regulations, including increasingly stringent regulatory requirements in areas such as primary care, behavioral health, and oncology. Payors must therefore navigate regulatory realities and amendments when constructing a view of network value and how to optimize it.

A cohesive network design approach is conducive to a sustainable competitive advantage

Sustainable competitive advantage in the current healthcare landscape is possible with the creation and management of high-performance networks. These networks can be developed with a cohesive network design approach that employs advanced analytics and sophisticated provider segmentation.

Cogitativo has developed a precision health solution that combines proprietary machine learning capabilities and health system operational expertise to capture and harmonize the comprehensive observational, predictive and causal insights required to accurately categorize providers and provider groups according to their value. The solution also accounts for critical patient and provider information with known direct implications for care.^{19–22}

Specifically, Cogitativo is the market leader in integrating clinical biomarkers, social determinants of health (SDoH), provider demographics, and provider quality and cost performance.

Cogitativo's solution leverages two proprietary machine learning models, which measure a Disease Progression Index (DPI) and the value of organic provider collaborative communities.

DPI allows for assessment of provider impact using temporal changes in patient disease progression

DPI provides a prediction that an individual patient will progress in their disease state within given time frames by applying machine learning algorithms to vast data including:

- Claims data
- Electronic health record (EHR) data
- SDoH data
- Clinical literature

Unlike MIPS, HEDIS, and HCAHPS, which can provide high level information on outcomes and quality, DPI evaluates the direct impact of providers on their patients and can identify other relevant health drivers, including what differentiates the best providers. In addition to filling in these critical gaps in traditional quality metrics, DPI provides anomaly detection with respect to costs to identify distinct patterns in billing and clarify cost realities.

Identification of high-value organic provider collaborative communities can improve system quality and cost

Tighter physician relationships that involve greater collaboration have been shown to produce better outcomes at lower cost.²³ Because less-fragmented networks are more cost-efficient, the need to identify key influencers within communities as part of network design strategy has been identified as a network analysis priority.

While current tools can to some extent analyze provider interactions in formal networks, more meaningful provider relationships often develop as part of informal networks of trust. These real-world networks have not been penetrated by traditional network design tools.

We use social network analysis to address the unmet need to identify real-world collaboration patterns, examine their impact, and apply critical insights to design optimal provider networks. Specifically, using claims data and provider demographic data, we identify communities of providers who frequently collaborate in the delivery of patient care, as well as key clinical leaders (KCLs) who are highly connected and influential providers within those communities.

Given that these “networked” communities better reflect how care is delivered versus contracted networks, they offer vital information to organizations on how collaboration affects cost and quality. Equipped with these data, stakeholder organizations can construct high-performance networks based on existing network features that organically generate quality in the community.

Takeaway

Cogitativo unlocks value by optimizing networks to best serve patient communities

The communities identified through Cogitativo overcome challenges that limit payors' abilities to develop and maintain high-performance networks, becoming new building blocks for quality and outcomes. In a test case, these communities delivered approximately 10% improvement in controlling patient disease progression in chronic kidney disease, while lowering costs by roughly 20%.

The new analytically informed Cogitativo network design approach optimizes networks to meet value-based care goals by:



DISCOVERING QUALITY. Not only does Cogitativo produce data on quality of care at individual provider and community levels, but it generates insights into drivers of care quality and reduction in disease state progression.



IDENTIFYING CARE GAPS AND UNMET NEEDS. Cogitativo reveals network strengths and critical gaps that inform payors' strategies for provider recruitment and alignment, as well as the timing and pace of migration into high value-cohorts.



ELUCIDATING PRODUCTIVE COLLABORATION. Cogitativo identifies network communities within specific geographic locations and analyzes how provider collaboration and connectivity affects performance.



ENABLING DEEPER UNDERSTANDING OF SPECIFIC PATIENT POPULATIONS. Cogitativo can be used to advance knowledge related to organizations' defined populations and facilitate the development of condition-focused products.



DEMONSTRATING THE EXTENT TO WHICH NETWORKS APPROPRIATELY SERVE TARGET POPULATIONS. Cogitativo enables organizations to monitor and address how well networks are designed to appropriately serve target populations and how effectively they create value for the people they serve.

Through these capabilities, Cogitativo produces actionable data that can be leveraged not only to improve the design of networks themselves, but to improve care at various touchpoints across these networks.

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