Since its establishment in 1985, Geisinger Health Plan (GHP) has garnered numerous accolades for quality, innovation and service. An early advocate of population health principles and value-based care delivery, GHP has been widely recognized and emulated as a model for healthcare transformation.

As part of the Geisinger Health System, an integrated delivery network that serves rural northeastern and central Pennsylvania, GHP has acted on the belief that driving quality is the best way to reduce cost. Quality, satisfaction and efficiency can be improved simultaneously – but only by redesigning the delivery of care and payment models.

Geisinger’s health plan and health system leaders recognized that sustainable population health management called for alignment of their objectives. “We needed to find that ‘sweet spot’ in the middle where the synergy between clinical and financial best practices could develop,” said Janet Tomcavage, chief administrative officer for GHP.

Situation

Since 1995, Geisinger Health System has invested more than $100 million in hardware, software and training to implement an electronic health record (EHR) system. The EHR went live in 2002 at all ambulatory sites and in 2007 at the main inpatient campus. While this offered a foundation to build from, the EHR could not house clinical data for the population of GHP’s membership that sought care outside of the Geisinger Health System and did not offer all the decision support needed for population management.

Equally important, GHP was interested in adding data aggregation and health care analytics capabilities. “It’s about translating all of that data into action,” Tomcavage said. “Data itself is not the answer. Using data to redesign your care – then bringing data back around to tell you how that redesign is impacting quality and utilization – that’s the answer.”

The IT team also weighed in on their infrastructural challenges. “The need for change was obvious,” said Jim Cibak, IT director for health services and support systems. “The core system in use for 12 years had accumulated a patchwork of enhancements, addendums and point solutions.” These had supported numerous disparate initiatives and rapid-response measures intended to move GHP swiftly toward its transformational goals.

GHP’s care management challenges stemmed largely from data management bottlenecks. Besides a lack of transparency that impeded workflows and collaboration across all the teams, the lack of integration made it difficult to manage risk at the plan-of-care level. Clinical teams didn’t have the access or the analytics to tap the richness of claims data, which is critical to driving better outcomes. The IT team also voiced concern over basic system usability. “We were supporting over 700 application interfaces stemming from the claims platform – an unwieldy spider web of data transferences that was very costly to maintain,” said Cibak. This problem affected clinical workflows as well. “The clinician’s user experience was fraught with too many applications,” he said, “and too little interoperability among those applications.”
GHP stakeholders arrived at a consensus: They needed to integrate its disparate, widely scattered information flows into a single, powerful platform that could aggregate and normalize data and apply analytics built specifically to address their complex needs. For 15 years, the organization had built, evaluated and refined innovative care models, but without these two elements it was not likely to achieve the “continuous learning” that it considered a mainstay of population health management.

Using analytics built on such a platform, GHP staff would be able to apply powerful algorithms to the full spectrum of clinical, financial and administrative data. For example, they would be able to identify and stratify specific populations of patients and disclose which of them consumed the most resources or posed the greatest risk of hospital admission. They could identify trends in disease prevalence, compare the effectiveness of treatment options and determine best practices. Analytics would also enable them to assess their utilization of medical and pharmacy services in the contexts of authorization and benefits.

Solution

“We made an exhaustive search, kicking the tires on dozens of available systems,” said Vicki Harter, director of clinical information systems at GHP. “No existing system would solve all of our problems; we needed a solution – not just a system. When we first met with Caradigm, they listened long and hard as we described dozens...make that hundreds...of problems from units all across our organization – each of them working in their respective silos – and distilled them down to a core set of themes.”

Once GHP had selected Caradigm as the most promising provider of enterprise-scale IT solutions for healthcare, the two organizations agreed to a development partnership rather than a traditional client-vendor relationship. As partners, they pursued care management as the best arena for making the most immediate impact. “The patient information our care managers and nurses needed was distributed across 19 different applications and databases,” said Harter. “We wanted transparency of information – ‘one patient, one record’ – accessible to all providers on our team, but also to the patient’s personal care community, including family members.”

At the top of GHP’s wish list was an intelligent plan of care – a decision-support function that would ensure that the care manager didn’t miss the mark. It would factor in the patient’s goals, problems, assessments and prior interventions and recommend evidence-based care measures. Because the patient’s condition can evolve rapidly, built-in analytics would factor in updates in near-real time. “We can’t afford gaps in care,” said Harter, “and at the same time, we can’t afford the redundancies that often result when we try to close those gaps.”

Analytics also come into play at the population level. As care managers stratify patients based on clinical indicators, new categories of illness can emerge that drive changes in each patient’s personalized plan of care. Hence, the care plan must update swiftly in response to new population health data as well as personal data from the most recent assessment and diagnostics.

GHP also wanted to streamline workforce collaboration by bringing transparency to clinical workflows. Each member of a care team or clinical unit needed to know who was doing what to whom. Task management and work queues at GHP had to be merged onto a single dashboard that would make it obvious to the care manager on Monday morning which tasks took priority and who had responsibility for them.
To optimize collaboration, GHP considered it critical to determine which member of the care team did the best job of providing which service. “You can’t do good pop health,” Harter said, “without considering care management and utilization management or pharmacy intervention.” The team asked for analytics that would help them stratify the utilization of the care team, not only to ensure that they were practicing to the top of their licensure but that their services were appropriately matched to the needs of a patient or population.

GHP took an early interest in the Caradigm Intelligence Platform (CIP) because it would provide the capabilities needed to build out a clinical data repository and marry it with the data warehouse and claims-processing platform. The platform also leveraged the Microsoft technology stack that GHP already had in place, which would enhance overall commonality and reduce the risk of interoperability issues down the road.

For the clinical information systems team, extensibility had been a core theme from day one. The Caradigm solution would allow them to continue to innovate as their needs evolved. GHP’s business was changing constantly, so it was critical that the Care Management application allow stakeholders to customize workflows, business rules and common forms as their needs dictated.

Impact

The Caradigm Care Management application that developed out of this dynamic relationship will allow GHP to coordinate care across the patient’s entire medical “neighborhood” and personal support network. “Care teams need the collaborative framework and analytics to manage a care plan to the optimal clinical and financial outcomes – no matter how rapidly a patient’s condition or priorities change,” said Brian Drozdowicz, vice president of population health and analytics for Caradigm. “We’ve made the connection between care quality and utilization efficiency as transparent as possible to help GHP realize its vision of sustainable population health management.”

With the new Care Management application running on the Caradigm Intelligence Platform, Tomcavage expects a measurable acceleration of GHP’s transformational initiatives. As an immediate benefit, the integration of task management and work queues onto a single dashboard will, she anticipates, enable each care manager to handle a larger caseload than they currently manage – allowing GHP to reach a larger portion of the population they serve.

“All those folks who are part of a population health strategy – the primary care physicians, care managers, nurses, pharmacists, radiologists, respiratory therapists and PTs working out of multiple systems with no intuitive decision support, no transparency of data – that’s what we hope to change with Caradigm’s solution propelling our population health strategy into the future,” Tomcavage said.

Cibak reflected on co-developing Care Management with Caradigm. “It’s not just another client-consultant relationship,” he said. “The engineers came in, absorbed themselves in our business and listened carefully to fully grasp the clinical and financial complexities we deal with. Partnering with Caradigm has been an enriching experience for all of us.” GHP will continue to partner with Caradigm in developing a core set of population health management applications that include utilization and pharmacy management, wellness management and patient engagement.

ABOUT CARADIGM

Caradigm is a healthcare analytics and population health company dedicated to helping organizations improve care, reduce costs and manage risk. Caradigm analytics solutions provide insight into patients, populations and performance, enabling healthcare organizations to understand their clinical and financial risk and identify the actions needed to address it. Caradigm population health solutions enable teams to deliver the appropriate care to patients through effective coordination and patient engagement, helping to improve outcomes and financial results.

The key to Caradigm analytics and population health solutions is a rich set of clinical, operational and financial data delivered to healthcare professionals within their workflows in near-real time. This data asset serves as the foundation for a growing number of innovative healthcare applications developed by Caradigm and industry partners, providing rapid incremental value to customers. For more information about the company, please visit www.caradigm.com.