

Sutter Health: Reinventing Healthcare in the Digital Era



“Our data management strategy enables Sutter Health to understand the relationships between individuals and delivery locations, contributing to outstanding care delivery, affordability and patient satisfaction.”

Vijay Venkatesan, VP of Enterprise Data Management, Sutter Health

Sutter Health is one of the nation's leading not-for-profit networks of community-based healthcare providers, delivering stand-out care across more than 100 Northern California communities. The network supports more than two dozen locally run acute care hospitals as well as physician organizations, medical research facilities, region-wide home health, hospice and occupational health networks and long-term care centers.

Sutter Health is taking bold steps to enhance the well-being of the people and communities that they serve in Northern California. This involves re-setting the standard for compassionate, excellent healthcare services through expert, personalized care that is both high quality and affordable. The strategy is both a competitive differentiator and an opportunity to improve patient outcomes.

The Sutter executive team understood that the insights needed to be successful in winning patient loyalty and delivering great, cost-effective care were contained within the explosion of data being generated across the system every day. By taking a holistic

approach to leveraging data as a corporate asset, Sutter Health would be poised to deliver more consistent, relevant and cost-effective enterprise performance management. Insights discovered through these advanced analytics would contribute significantly to enhancing operational performance, improving clinical outcomes and reducing the total cost of care.

The strength that Sutter Health possesses in community reach and breadth of services are also proving to be among the greatest challenges, with the care provider needing to unlock the potential contained within all its data. Relevant data surrounding everything from patients and providers, to interactions, locations and employees resided in local, difficult to reach application silos across the health system. Much of it remained relatively untapped and fragmented.

Imagine, for example, if Sutter Health's analytics was powered by a comprehensive view of the patient across every point of service, including which clinicians they saw, the procedures performed, medications prescribed, their family members and



Business Initiatives

- Deliver expert, personalized care across more than 100 Northern California communities
- Enhance the well-being of people in the communities served in the face of new competition and business models
- Reduce risk and adhere to compliance and regulatory reporting requirements
- Innovate transformative care solutions emphasizing high-quality, patient centric care through Sutter Health's recently launched Research

Technology Strategy

- Bring together and relate patient, provider, member, location and employee data currently scattered across the organization
- Create self-service analytics environment, putting data directly in the hands of decision-makers
- Provide robust data stewardship tools that are designed for use by stakeholders
- Make trusted data available more quickly to more

Inside the Solution

- Informatica PowerCenter
- Informatica Data Quality
- Informatica Multidomain Master Data Management (MDM)
- Informatica Information Lifecycle Management (ILM)

even their most recent billing address. Armed with this knowledge, the network would be able to deliver an even higher-value encounter personalized to each patient's unique needs, preferences and genetic makeup. This synchronized view would also support the delivery of more efficient healthcare and improved care accountability.

Numerous challenges can manifest themselves because of inconsistent data management and governance. First, data starts to exist in systems spread across the entire organization. Data environments can and do proliferate in spread marts and data marts across the enterprise. This makes it difficult to access, connect and analyze the disparate datasets. Second, the datasets needed to support new healthcare business models can be incomplete and fail to reach decision makers in a timely fashion. Couple that with data that is sometimes of questionable quality—and trust in the data can be soon eroded. Third, the lack of a formal data governance structure means that reports and key performance indicators (KPIs) cannot always be relied upon for decision making. The new paradigm helps prevent and minimize the occurrence of the above set of problems.

“To create a more personalized, high-value healthcare experience, we needed to put new demands on our data,” explains Vijay Venkatesan, VP of enterprise data management, Sutter Health. “Sutter Health had a requirement to make trusted data available more quickly to more people, allowing for new insights to be discovered. A focus on data access and use would enable Sutter Health to achieve even higher levels of healthcare quality and access while impacting operations immediately.”

Putting the Potential of Healthcare Data to Work

In response, Sutter Health took an agile and programmatic approach to accelerate the value of analytics. As part of the enterprise information management program, a big data paradigm was adopted. This included a data lake to serve as a centralized catalog for information across the enterprise. This was paired with data management tools which extract data from source locations, apply business logic to transform it into trusted, usable forms and make it available for self-service access by stakeholders.

Prospective analytics using traditional business intelligence, visualization and predictive analytics allows staff to plan capacity more effectively, route provider enquiries and better anticipate patient needs. More timely access to Epic data for analysis is also accelerating and improving decision-making.

Sutter Health executives knew that looking internally and making better decisions wasn't enough though. The care provider also needed to take action to more effectively operate as a single, integrated organization. ‘One Sutter’ is the mantra for this far-reaching transformation: a strategy to create a single, patient-centric view of the organization. A key component of this ‘One Sutter’ initiative is an enterprise customer relationship management (CRM) platform based on Salesforce.com within the Shared Services organization.

The intent is to consolidate services, drive more cohesion and spearhead the development of a dedicated health plan offering. When a member patient contacts the call center, for example, Salesforce.com presents agents with a complete, integrated view of the member patient's demographic details, care history, preferences and policy

details. Powering Salesforce.com with this total customer view will help steer more responsive and targeted service, resulting in increased customer satisfaction and loyalty.

A single, Connected and Authoritative View of Information

Master data management (MDM) is the glue that binds these initiatives together, introducing a single golden record of employees, patients, members, providers, facilities and their interactions—and helping move closer to the ambition of ‘One Sutter’. The clean master data feeding the EDW and CRM systems ensures there is a single, connected and authoritative view of previously disparate, duplicate and conflicting information. MDM allows Sutter Health to identify the unique people and places, as well as the relationships among the data, and achieve a complete view of all interactions across the health system.

Sutter Health deployed the first five domains of this MDM strategy (patient, employee, healthcare provider, facility and reference domains) in only nine months. Their intentional agile approach is a best practice. By gathering use cases, prioritizing them and executing one use case at a time, the team was able to rapidly achieve value from meaningful analytics and accurate master data. It also helped establish additional credibility and increased support for the program. Moving forward, the intent is to release a new use case every ninety days.

Venkatesan comments, “This data management strategy enables Sutter Health to understand the relationships between individuals and locations right across the care delivery network. This all contributes to outstanding care delivery, affordability and patient satisfaction.”

Sutter Health's pilot Advanced Illness Management (AIM) program demonstrates the power of the strategy. Sutter Health's aim is to provide timely dashboards and self-service to all stakeholders to improve patient care and regulatory compliance. Previously, AIM reporting involved a lot of spreadsheets, low user adoption and no self-service reporting capability. The comprehensive view of reliable data accelerates self-service analytics by making common data definitions easy to find and use through formalized governance and stewardship. The result? The thirst for analytics has grown; AIM reporting is now credible and accessible, while users can also rapidly modify the dashboards in a self-service environment, free of IT bottlenecks.

The Role of Informatica

Sutter Health standardized on a comprehensive portfolio of integrated Informatica data management technologies, including data integration, data quality, MDM and information lifecycle management (ILM). Informatica PowerCenter draws data from multiple sources, formats

and locations across Sutter Health, integrating it into the EDW. Informatica Data Quality cleanses that data at the source, ensuring it is reliable, accurate and trusted. Informatica is powering self-service analytics through access to clean, safe and connected data.

Informatica Multidomain MDM is the business enabler in the deployment, the engine that brings together the total view of healthcare providers, locations, employees, patients, members and their interactions. This is based upon the data governance policies defined by the business and managed by data stewards throughout the organization. Informatica Multidomain MDM supports multiple domains of data (including patients, providers, terminology and locations) and informs analytics with relevant and trustworthy customer data.

Productivity is further enhanced through a unique and complete picture of valuable relationships within and between the data. This includes, for example, understanding when patients receive care, associating members to their household and tracking patient to care team relations over time. The Informatica Multidomain

MDM hub supports not only Sutter Health's analytics environment, but makes master data, hierarchies and relationship data available to operational systems across the extended Sutter Health enterprise. A long time IBM Initiate customer, Sutter Health chose Informatica MDM as the enterprise MDM platform for two key reasons. First, the ease and speed at which Sutter Health's complex data governance policies could be implemented, and second, Informatica's true multi-domain capability that enabled Sutter Health to master virtually any data across the enterprise. It is these attributes— combined with the speed at which Informatica's meta data driven approach to configuration of business rules and services can be deployed— that contributed to the rapid, nine months deployment timeline.

"Was it ambitious to assume we could implement this master data platform in nine months across a decentralized organization? Not at all. We trusted that the Informatica solutions would deliver what our team needed to be successful—and they did," Venkatesan concludes.



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