CHRISTUS Health

> "The solution must provide end to end integration that will effectively support a constantly shifting set of demands for data in this dynamically changing healthcare environment—both strategic and operational perspectives."
>
> - George Conklin SVP and CIO, CHRISTUS Health

CHRISTUS Health – taking better care of patients

"Everything we do at CHRISTUS Health is about taking better care of patients. While it was imperative that we control the growing volumes of data, we knew that if we did it right, we had an unprecedented opportunity to use that data to increase the effectiveness and quality of the services we deliver to patients" says Mavis Girlinghouse, System Director of Business Intelligence at CHRISTUS Health. Data growth at CHRISTUS has come from shifts in care delivery from fee–for–service to payment–forvalue and from acute episodic care to chronic disease management. In addition to operational information like billing, registration, etc., clinical data is being captured in greater volumes.

Girlinghouse and team recognize that because of the pace at which they've grown, relevant patient information was spread across the organization in isolated, non-standardized silos. As a result, there wasn't an easy way to aggregate and govern data. Delivery of the right data to the right person required significant manual effort which minimized productivity.

CHRISTUS Health is an international, not-for-profit Catholic health system comprised of more than 60 hospitals and long-term care facilities, 175 clinics and outpatient centers, and dozens of other health ministries and ventures. Valued at over $4.6 billion, the CHRISTUS Health system spans seven U.S. states and six states in Mexico. Its 30,000 associates and more than 9,000 physicians are dedicated to providing compassionate, high quality health care and improving the communities it serves.

Unleashing information potential

To better improve operational efficiency, clinician insight and patient experience, CHRISTUS needed to integrate and organize data across the enterprise. The scope included data from

Overview:
CHRISTUS Health is focused on the patient—improving outcomes through operational efficiencies and data driven decision making. With end to end integration, their business intelligence initiative provides accurate, integrated views of patient data enterprise-wide.

Business Needs:
- Ensure the right people have the data they need at the right time in order to deliver value based care
- Integrated and organized data across the enterprise
- Common tools, taxonomies and standards across the enterprise

Data Challenges:
- Lack of financial or clinical data standards
- Silos of data in an array of applications and EMRs
- Absence of enterprise data governance and data quality
- Significant effort involved in delivering data to the right person

Solution:
- Enterprise analytics reliant on the Informatica Platform for enterprise information management, Teradata Data Warehouse and Healthcare Data Model and MicroStrategy Business Intelligence.

regulatory, clinical, finance, human resources, supply chain and research. To achieve their vision, the executive team invested in a program aimed at achieving growth, transformation and innovation goals.

CHRISTUS designed a business intelligence solution to meet these goals. The solution included an enterprise data warehouse with a healthcare data model capable of accommodating all patient information, a business intelligence layer and enterprise information management tools that enable data to be efficiently captured, normalized and interrogated.

In collaboration with line of business leaders, the Chief Medical Information Officer (CMIO) and Health Informatics, Girlinghouse structured a multi-phased implementation which would deliver quick wins and ongoing benefits. Together, Girlinghouse and the CMIO, S. Luke Webster, MD, identified computerized physician order entry (CPOE) adoption as the first clinically related measurement.

Through the easy-to-navigate interfaces, leaders across CHRISTUS' 24 hospitals assess the impact of evidence-based CPOE adoption. Users navigate these dashboards to understand the impact of CPOE adoption on patient mortality rates, acute length of stay and inpatient readmission rates. These metrics can be viewed across all CHRISTUS hospitals at the enterprise, regional, individual facility and individual physician levels.

As a result of connecting this data and making it accessible in meaningful ways, other clinically oriented and administrative applications are now live or in development. For example, release two includes a supply chain application which has already helped the newly centralized supply chain/accounts payable team gain visibility into all supply and payable details including discounts and payment terms. Release three is focused on reducing wait times in the ED. With the No Wait Emergency Director application, emergency directors (ED) can evaluate, monitor and reduce time from patient presentation in the ED to treatment by a provider.

Results

CHRISTUS has validation that their efforts work. Patient care orders populate the CPOE dashboard dynamically. On 13 million orders, substantial positive impact has been observed on mortality rates and acute length of stay – readmission rates are also trending positively. Operationally, CHRISTUS realized over $500,000 in savings within a few months of going live with the supply chain application.

CHRISTUS is now using clinical and administrative data in a way they were previously unable to do. Clinicians can converse with peers and have immediate access to all relevant data in any facility across the system. Business leaders and clinicians are able to have make decisions about patient care and operational efficiency that impact lives and save money.

"We're able to view the data in new ways. For the first time ever, we're able to compare performance across different facilities and surface patterns that allow us to identify what's working and leverage that evidence across the whole organization. Our clinicians are enthusiastically using the system and we're at the point of being able to really quantify exactly how our actions are impacting patient outcomes. We're on the verge of something very, very exciting" says Girlinghouse.

She adds, "It doesn't matter where the data comes from. Informatica has given us the capabilities to channel it to a single location in a useful format. Irrespective of which member of the care team is involved, the right information is always available, enhancing the way patients are treated and operations are improved."

The results are a differentiator not only for CHRISTUS, but in the healthcare industry overall.

The Role of Informatica

Informatica has been a long-term partner of CHRISTUS Health but the team still performed extensive due diligence to ensure they selected the right solution, one capable of handling current requirements in addition to supporting future plans. Mavis says, "It was important to select a partner that would be around in five years; providing continual support and ensuring consistent products. My team and I researched the leading analysts' recommendations and saw that Informatica had been highly ranked for a very long time. We felt very confident Informatica would meet our enterprise information management needs."

Three phases into the project, Mavis says "I know I made the right decision — I wanted a partner and that's what I have. Informatica has been a great help in guiding me and helping us succeed. It's a greatrelationship."

CHRISTUS has also kicked off a Master Data Management (MDM) project with Informatica. The first area of focus: supply chain. The supply chain application will be continually improved upon with supplier, product and location master data and information governance.

Technical Diagram
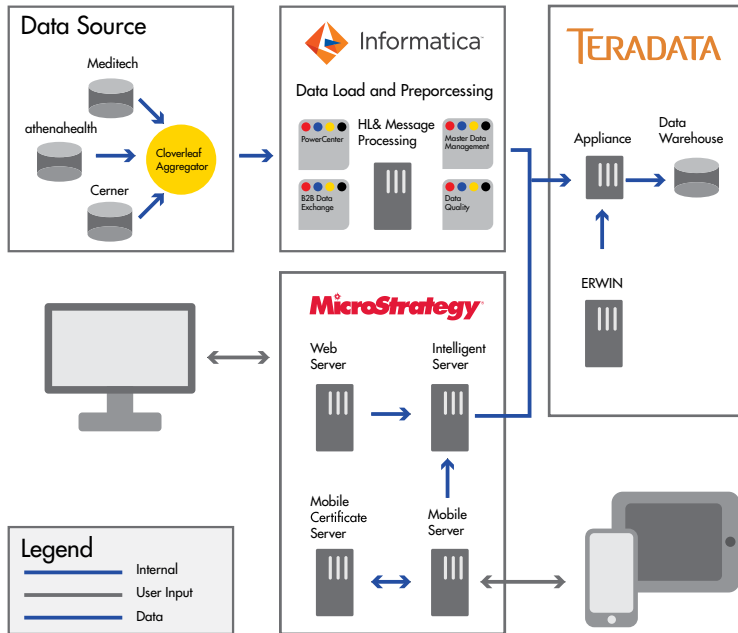
This diagram illustrates the business intelligence architecture that CHRISTUS has implemented.

Results:

Unprecedented ability for care providers to correlate and interrogate data; allowing for more informed decisions and improved quality of care including:

- Increased adoption of evidence based CPOE resulting in decreased length of stay
- Reduced emergency department wait times
- Supply chain savings

Inside the Solution:

- Informatica B2B Data Exchange
- Informatica Data Quality
- Informatica ILM Data Archive
- Informatica Master Data Management
- Informatica PowerCenter
- Informatica PowerExchange
- Informatica Professional Services
- Informatica Address Verification

Digital transformation is changing our world. As the leader in enterprise cloud data management, we're prepared to help you intelligently lead the way. To provide you with the foresight to become more agile, realize new growth opportunities or even invent new things. We invite you to explore all that Informatica has to offer— and unleash the power of data to drive your next intelligent disruption. Not just once, but again and again.

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