**OCHSNER HEALTH SYSTEM**

**EXECUTIVE SUMMARY:**
Ochsner Health System opts to deploy a new EpicCare electronic medical record (EMR) system and engages TEKsystems to support its critical preliminary data cleansing and data migration effort.

**TECHNOLOGIES SUPPORTED:**
EpicCare EMR; Oracle; Informatica; SQL; StarSchema Data model; Oracle Business Intelligence Enterprise Edition (OBIEE)

**Profile:** With headquarters in New Orleans, Ochsner Health System is a non-profit, academic, multi-specialty healthcare delivery system dedicated to patient care, research and education. Ochsner’s system includes eight hospitals and over 38 health centers throughout southeast Louisiana. Ochsner employs more than 11,000 healthcare professionals system-wide. TEKsystems has partnered with Ochsner for more than 16 years.

**Situation:** Recent federal mandates set Meaningful Use of interoperable electronic medical records (EMR) in the health care system as a critical national goal and incentivized adoption—the goal being, the improvement of overall patient care, safety and outcomes. Ochsner sought to satisfy both the federal requirement and its own desire to improve patient outcomes, by implementing a system-wide EpicCare EMR system. This required a significant investment of time, money and resources and its success was greatly dependent on the company’s ability to aggregate, cleanse and migrate its existing patient data. One barrier to this effort was that Ochsner had experienced tremendous growth over the last five-year period. In addition, after several acquisitions, Ochsner had inherited a siloed data warehouse from each of the newly acquired companies. This challenge hampered Ochsner’s ability to effectively manage the full inventory of its patient data across data sources.

In preparation for the EpicCare implementation, Ochsner needed to obtain business intelligence across multiple systems in order to gain a clearer understanding of the data stored enterprise-wide. In doing so, the company hoped to curb many of the issues it was now facing due to its data being housed in so many stand-alone systems. One such challenge was the business reports that the company required took an incredibly long time to run because each data warehouse needed a separate extract-transform-load (ETL) process to capture the requisite data for each report. To accomplish this, the ETL team manually generated reports to supply data to the different business units, and this underscored the pain associated with redundant processes. The next step was to migrate each of the stand-alone systems to a centralized electronic data warehouse (EDW). The Ochsner management team decided to accomplish this via an Oracle data warehousing tool. Ochsner also had a four-month deadline for its parallel EDW effort which required importing 80% of the data into the new centralized system. This conflicting priority and the company’s limited resources meant that some business units were going to have to wait the full duration of that four-month period before receiving their BI reports.

The current process was highly inefficient and time-consuming and because of the repetitive nature of the company’s reporting needs, this was a consistently frustrating challenge. Unfortunately, this led to a stressful work environment for Ochsner’s existing staff and the company needed to take immediate action in an effort to motivate and retain its workers. The plan was to build the

"With TEKsystems, we can always count on a partner that is focused on our specific project and resource needs. This partnership and style of collaboration has lead to many successful project completions and continues to do so today. TEKsystems HIT focus and knowledge along with their ability to build a strong team has allowed Ochsner to expand our internal abilities and achieve a much greater level of service for our customers.”

– Director IT Analytics, Ochsner Health System

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new centralized EDW and create specific data marts that would house each particular type of data (i.e. hospital billing, patient visit information, etc.). Having enjoyed a long history of successful projects, Ochsner once again turned to TEKsystems for human capital management (HCM) expertise, and our ability to quickly mobilize a full team of capable ETL resources.

Solution: To alleviate Ochsner’s data challenges, the TEKsystems team sought to create an electronic data warehouse (EDW) to serve as a solid foundation and an analytical platform custom built to meet the organization’s ongoing need to have the right data easily accessible by the right person, at the right time and in the right format. We began by conducting a thorough assessment of Ochsner’s internal data environment including an audit of each of the siloed databases. In order to achieve a “single source of truth” structure, we also found a need to improve data collection and governance procedures.

The TEKsystems team worked collaboratively with the client-side staff to document a roadmap to achieve these goals. As a result, TEKsystems deployed a 12-person team charged with creating an integrated EDW structure capable of producing true business intelligence, real-time reporting and rich analytics.

A dedicated Project Manager (PM) was appointed by TEKsystems to act as the primary liaison to the client decision makers. The PM was also accountable for oversight of the entire project. The team’s lead business analyst engaged Ochsner’s key stakeholders to capture data requirements from the business units and ensure that all the data components were moved efficiently and effectively. Then our data architect provided oversight for ETL, migration and EDW development processes, while ETL developers were tasked with the actual extraction, transformation and loading functions required for mapping the legacy data from the multi-system structure to the new centralized EDW. TEKsystems deployed a small team of data modelers who, using a star schema data model and online analytical processing (OLAP) technology, built analytics to enable business units to view and manipulate graphical representations and a real-time dashboard view of its data.

Benefits: Implementing the EpicCare EMR system, will enable Ochsner Health System to meet regulatory mandates and ultimately make it easier for Ochsner patients, nurses and physicians to interact and communicate with healthcare providers both inside and outside Ochsner Health System. An EMR system implementation, as with any software implementation, is a costly investment where data management is a key consideration. Ochsner’s goal of deploying a fully functional EpicCare EMR system was greatly supported by TEKsystems’ ability to help manage and execute this preliminary data cleansing and data migration effort.

To date the project is successfully running on time and on budget. Ochsner was so pleased with the quality of these resources that the team’s initial contract extension included additional data validation and cleaning activities. Ochsner has also opted to hire a PM and data architect as permanent placement resources.

Also paramount to the success of the initiative, the following results have already been achieved and reported by the Ochsner staff:

- Building a solid foundation for gathering data, leveraging analytics and running reports
- Positioning its EDW as its “single source of truth”
- On track to meet Meaningful Use mandates in the required timeline
- Multi-tiered user-friendly and user-specific data structures with content geared to each specific audience
- Ability to access real-time data to make proactive and corrective actions
- Dashboards which aggregate multiple data tiers into a global view
- Analytics provide the ability to “drill down” to see data sets on at greater detail