INFORMATICA®

SUCCESS STORY

M.D. Anderson Cancer Center Unlocks Critical Patient Data With Informatica

"Our commitment to a patient centered data warehouse is key to our ability to improve patient care and promote research. Informatica is an important component to our patient centric warehouse projects."

—Leslie Kian, Medical Informatics Director, University of Texas M. D. Anderson Cancer Center

CHALLENGE

Integrating patient data from five major disparate sources to improve analysis capabilities, operational planning and research

INFORMATICA SOLUTION

Informatica PowerCenter®

BENEFITS

- Robust architecture
- Improved decision making capabilities
- Elimination of custom code

NUTS AND BOLTS

- Data Integration: Informatica
- Sources: Oracle, legacy proprietary systems, and flat files on multiple platforms
- Target: Oracle
- Platform: IBM AIX

Celebrating six decades of "Making Cancer History", The University of Texas M. D. Anderson Cancer Center is located in Houston, Texas, on the campus of the Texas Medical Center. It is one of the world's most respected centers devoted exclusively to cancer patient care, research, education, and prevention. M. D. Anderson ranks #1 among the nation's top cancer hospitals in U.S. News & World Reports annual "America's Best Hospitals."

The Challenge

In the healthcare industry, disparate transactional systems are required and implemented to support the operational aspects of a hospital. While these fragmented systems offer individuals such as researchers, clinicians and resource managers the opportunity to analyze their data and make intelligent decisions, they also create an enormous challenge.

The systems in use at M. D. Anderson today give a glimpse of the integration challenges they face. M.D.Anderson focused on five major source systems that captured patient related information, many of which were mainframe-based. Since these mainframe systems house many different types of data—both relational and non-relational, including proprietary database systems—M. D. Anderson encountered several challenges integrating its patient centered information. For example, because of the complexities involved in extracting proprietary data, the organization only extracted and loaded data for analysis—there were very limited data transformation processes. Furthermore, since some of M. D. Anderson's patient data resided in older systems, data structures were inconsistent, which could negatively impact the organization's ability to quickly and cost effectively make changes.

Most importantly, since the organization's repository mainframe data extraction process had no incremental update logic, every time it consolidated patient data for analysis, it had to update all its data. This prevented the organization from seeing a history of updates and modifications. Moreover, the organization realized this approach to data extraction was not the best use of computing resources as it became increasingly difficult to manage growing data volumes.

The Solution

M. D. Anderson decided to develop a fully integrated patient centered data warehouse and selected the Informatica as part of a strategic initiative focused on re-designing its reporting infrastructure for patient data analysis. Ultimately, the project's goal is focused on improving information delivery, increasing decision-making capabilities, and building a wider knowledge base of the information collected. At the same time, it is mandatory that all patient data continue to remain confidential upholding the institution's patient privacy policies.

Today, M. D. Anderson is integrating patient data from transactional systems through a codeless development environment for strategic analysis. By effectively consolidating patient data through its patient centered data warehouse, M. D. Anderson researchers, physicians, and analysts are able to analyze up to 60 years of patient information by disease, diagnosis, and procedures and based on a multitude of demographic information.

Their knowledge experts, which includes both the Decision Support Services team and their peers throughout the organization, deliver added value to executive management, business center managers, physicians and researchers by providing information that helps them make better decisions about their operations and business, at the same time it guides the direction of their research.

One example of how the data warehouse is used by management can be seen in the area of operational planning. For example, by analyzing patterns in referral diagnoses and subsequent procedures, the organization can easily track the rate of patients screened for breast cancer. If this rate increases, the organization is now able to plan the areas of its hospital to expand or contract in the next few years to meet new patient care demands. Through its data warehouse, the organization is also able to make decisions on clinic size, potential areas for improvement in patient care, in addition to identifying cases for future research.

The Results

Robust Architecture

Using the Informatica data integration platform, M. D. Anderson has been able to more easily unlock critical patient data captured in its legacy systems and build a more comprehensive reporting architecture. For example, as business rules change today, the organization can now make changes to code through the Informatica interface instead of changing code directly. This new approach has enabled the organization to react to source system changes in substantially less time.

Improved Operational Decision Making Capabilities

By consolidating patient data from its transactional systems, M.D.Anderson can now analyze more effectively the trends exhibited by its 500,000 patients to make more informed decisions. And cancer researchers have another tool to improve their capabilities by monitoring patient progress through historical data analysis.

Elimination Of Custom Code To Imrpove Productivity

Leveraging the easy-to-use Informatica Designer GUI to visually define and execute all mappings and transformations, M. D. Anderson has been able to eliminate writing complex and time consuming custom code. In the process, the organization has been able to reduce the amount of time it takes to collect and cleanse data for analysis from weeks to days.

INFORMATICA®
The Data Integration Company™

Worldwide Headquarters, 100 Cardinal Way, Redwood City, CA 94063, USA
phone: 650.385.5000 fax: 650.385.5500 toll-free in the US: 1.800.653.3871 www.informatica.com

Informatica Offices Around The Globe: Australia · Belgium · Canada · China · France · Germany · Ireland · Japan · Korea · the Netherlands · Singapore · Switzerland · United Kingdom · USA

First Published: 2004

6640 (09/16/2008)