



CLIENT EXPERIENCE

Mount Sinai effectively uses patient data for the advancement of medical research with TCS' help

Customer
Mount Sinai Hospital

Industry
Life Sciences & Healthcare

Offering
Data Warehouse for data administration and research purpose.

Patient data can provide valuable insights into the causes of a disease, the effectiveness of treatments and interventions, and the effectiveness of health care services. As a well-known health care service provider, Mount Sinai Medical Center (MSMC) had sizeable patient data which it used for various clinical and non-clinical research, and decision support. However, this data resided in various systems spread across the center. MSMC was unable to get synchronised patient information and hence approached TCS to help consolidate data from Various internal systems into a single central repository.

TCS successfully delivered a data warehouse solution that not only provided a consistent global view of information but also supported the data administration function to ensure quality of data.



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MSMC is internationally acclaimed for excellence in clinical care, education, and scientific research in nearly every aspect of medicine. With over 300 programs, departments and clinics, MSMC provides a wide range of clinical services.

MSMC is home to an extensive array of top-notch research centers and laboratories, where scientists and researchers work to translate the rapid advances in basic science into innovative patient care. It also runs the Mount Sinai Hospital, a 1,171-bed, tertiary-care hospital which is one of the oldest and largest voluntary teaching hospitals in the United States.

Business Context

MSMC researchers, scientists and caregivers had a problem – volumes of vital patient-related data had to be pulled out from several transactional applications - patient, administrative, clinical, and financial systems - spread across the center. The silos of information caused delays and affected accurate decision-making. In addition, without integrated data, its research and analysis work suffered – researchers were unable to obtain approval for new initiatives without hard data to support their case. MSMC urgently needed a single central patient data repository that would provide accurate, updated and high- quality patient data. It also needed to establish a data administration function to ensure data quality and integrity, and assist users with data access.

MSMC decided to implement a data warehouse system and approached TCS.

TCS Solution

TCS utilised its Business Intelligence for Decision Support (BIDS™) methodology to provide a data warehouse solution that leveraged patient data for decision support and to initiate research programs. For this, TCS analyzed 15 MSMC applications that catered to the administrative, clinical and financial functions and studied the requirements for the new system in detail. The findings of the study were used to:

- Data model
- Design a common ETL framework
- Design and develop the GUI application called Expert Workstation

TCS also designed the framework for processing HL7 messages and storing them in a RDBMS, and designed and developed the ETL programs and jobs, the Business Object (BO) universe and reports, and the HL7 message processor. TCS then tested and implemented the warehouse.

TCS' BO Center of Excellence helped optimise the performance of BO reports, which reduced performance issues in assessing long running reports or in other words reports with large amount of data could be accessed faster.

TCS also provided support to establish the Data Administration function at MSMC; its charter was to coordinate processes that enforce data integrity principles, protect the investment in the warehouse, and assist users with access to data.

Leveraging its Global Network Delivery Model™ (GNDM™), TCS provided cost-effective domain and technology experts.

About Tata Consultancy Services (TCS)

Tata Consultancy Services is an IT services, business solutions and outsourcing organization that delivers real results to global businesses, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled services delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development.

A part of the Tata Group, India's largest industrial conglomerate, TCS has over 143,000 of the world's best trained IT consultants in 42 countries. The company generated consolidated revenues of US \$6 billion for fiscal year ended 31 March 2009 and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

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