

PROJECT BRIEF



Business Problems
Challenges
Deliverables
Outcomes
Data Sources
Technology

HEALTHCARE RESOURCE UTILIZATION

CUSTOMER:

Hospital Surgical
Supplier
– Midwest USA

PROJECT:

Resource Utilization,
Analytics & Reporting

BUSINESS PROBLEM

Staffing levels for anesthesiologists, nurses, surgeons, and other medical support staff represent a significant component of the fixed cost of hospital operations. Operating room utilization is a critical indicator of a hospital's effectiveness in managing critical resources and controlling operations costs. IT had worked with management to develop a mechanism for transferring data on operating room use, staffing, and suppliers into a workbook for reporting and limited analysis. The process required constant modification to data and formulas and provided limited information that could be effectively used to reduce costs.

The team required a fully automated solution that generated comprehensive metrics to support detailed analysis of operating room utilization, staffing, and medical support services as they relate to various surgical procedures, individual patients, and specific diagnoses.

CHALLENGES

- The data elements covered a diverse range of subject areas
- The data relationships were intricate, and required complex disaggregation of source data and re-aggregation through multi-stage relational tables
- Conformance to privacy guidelines and HIPPA regulations
- Time and date slicing accurate-to-the-minute

DELIVERABLES

- A set of DW star schemas that would allow for current requirements and provide an extensible structure for expansion into related subject areas for billing and vendor analysis
- Completely automated production of reporting and analytical tools, including an Excel-based analytical tool for ad hoc drill-down and dynamic analysis
- A set of standard operating room utilization reports for performance evaluation
- Industry's only comprehensive reporting and analytics tool for operating room utilization with extensibility to any other time based asset subject

OUTCOMES

- Improved medical resource allocation decisions
- Greater understanding of the efficiency and capacity of medical resources
- Increased revenue and profitability of the existing service agreement

DATA SOURCES

- Legacy application on SQL Server 2005 Database

TECHNOLOGY USED

- Microsoft SQL Server 2005
- Microsoft SQL Server 2005 Analysis Services
- Microsoft Excel 2007 with Excel Pivot Services 8.0

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