

Healthcare

Aligning Data with a Single Service Line

Integrated Delivery Network Continues Its Strategic Partnership with Edgewater

Our Challenge:

A large integrated delivery network located along the East Coast needed a way to measure the success of its new Service Lines. With its own health plan, physician group, and hospitals, the nonprofit organization wanted to benchmark the performance and growth of its newly defined and implemented Service Lines across the demographics in which it operates. Edgewater had previously designed and built the organization's Enterprise Data Warehouse and had entered multiple clinical, operational, and financial data sources into the warehouse for advanced analytics. Understanding the importance of a cohesive analytics system, the organization turned to Edgewater, its trusted strategic partner, to organize company data and compare that knowledge to information from Thompson Reuters. The organization needed to measure its performance and growth against the competition to increase Service Lines market shares, and Edgewater was there to help.

Our Solution:

- ▶ To design and develop cube analysis capabilities for inpatient hospital visit benchmarks including LOS, Mortalities, and Readmissions
- ▶ To integrate benchmark data from Thompson Reuters's CareDiscovery™ product
- ▶ To integrate the ETL system with the existing EDW infrastructure by loading data onto the existing EDW and "Patient Visit" data mart using Microsoft SQL Server 2008 Integration Services
- ▶ To implement readmission analysis with drill-through capabilities so a patient's hospital visit readmissions can be evaluated after an initial patient population is identified. This approach leveraged a novel, custom component to maintain the context of filters applied in the cube analysis view while drilling through to the readmission report



Is your Service Line
performance and growth

better
than your competitors'?

Its Benefits:

- ▶ Comparative analysis of Qualified; Inlier Qualified; Outlier Qualified Discharges LOS compared to expected (national averages) LOS – by total and averages.
- ▶ Mortality Ratio = Observed Discharges-Mortality Compared to Expected (National Averages) Mortality. → Are your mortality ratios better than or below national averages?
- ▶ Observed Mortality Rate = Observed Mortality Discharges / Qualified Discharges.
- ▶ Expected Rate of Mortality = Expected Deaths / Qualified Population of Patients who had a High Probability of Death.
- ▶ Analysis on avoided deaths → Is your performance better or worse than expected deaths?
- ▶ All above analysis may be filtered or sorted by dimensions including Facility, Service Line, Physician Specialty, DRG, Payer, Diagnosis, Time, and Patient.

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Integrate Benchmarks into Enterprise Data Warehouse

An example of how an organization might use benchmarks across all Service Lines

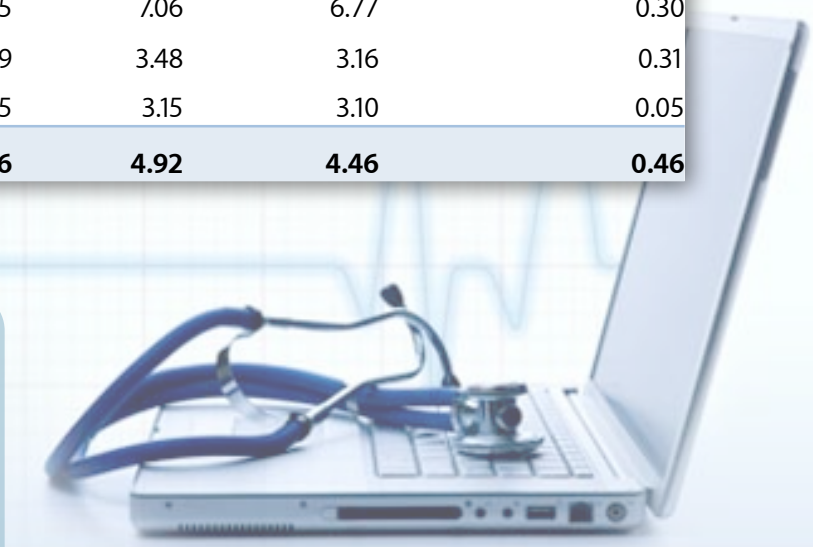
Service Lines	Thomson Reuters (TR) Discharges Total	TR LOS Qualified Average	TR LOS Expected Average	TR LOS Qualified Difference Average
Cancer	21,837	7.65	6.67	0.99
Cardiac	9,544	4.68	4.01	0.68
Musculoskeletal	9,478	5.03	4.58	0.45
Neurosciences	4,827	5.16	4.39	0.77
Respiratory	3,485	7.06	6.77	0.30
Spine	4,329	3.48	3.16	0.31
Women's Health	23,485	3.15	3.10	0.05
Grand Total	67,516	4.92	4.46	0.46

*Service Lines are demo data only

Scale for Future Data

Future data sets will include the following benchmarks:

- ▶ Charges
- ▶ Costs
- ▶ Quality Indicators
 - ▶ AHRQ PSI- Patient Safety Indicators
 - ▶ AHRQ IQI - Inpatient Quality Indicators
- ▶ Complications



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