

Healthcare

Healthcare Analytics: A Proven ROI

Can you answer these critical surgical service line questions?

- ▶ **Clinical:** Where (locations, care settings, teams, service lines) are we achieving our quality and safety goals across surgical services?
- ▶ **Operational:** Are our resources (labor, equipment, materials, facilities) deployed optimally to satisfy the patient and procedure mix?
- ▶ **Financial:** How profitable are we in our surgical care settings across the enterprise?
- ▶ **Anticipatory:** What can we do to intervene and change the outcomes?

Although many healthcare organizations expend significant time and effort to collect and store diverse clinical, operational and financial data, key information remains inaccessible and critical deficiencies persist.

The Challenge

- ▶ Critical data is buried within separate, individual transactional and database systems
- ▶ Inconsistent data sources and disparate implementations impede visibility into actionable performance metrics
- ▶ Answers to critical questions on patient outcomes, resource efficiency, costs of care take too long to answer

Business Intelligence Discipline Applied to Mission-Critical Data

- ▶ Standardize analysis and reporting across service lines and care settings
- ▶ Enable multi-dimensional, advanced analytics to reduce variations in quality, costs and outcomes
- ▶ Create an enterprise view to reduce costs, enhance revenue opportunities and better manage resources
- ▶ Isolate performance issues, model on best practices, localize correct actions
- ▶ Institute proactive data governance; leverage the value of enterprise data assets
- ▶ Establish a global data model, integrating primary data entities from heterogeneous sources and standardizing definitions for data consumers

Benefits

- ▶ Realized \$5M (3 times ROI) in first 12 months
 - Reduce inventory on hand from \$20M to \$4M across 6 facilities
 - Strengthened negotiations on vendor contracts from more accurate supply spend detail
- ▶ Improved accuracy of total cost of care and understand the impact on service line profitability
- ▶ Increased utilization of labor and material costs; clarify focus areas for corrective actions and/or best practices
- ▶ Better understanding of service line, facility, care setting and surgical team performance, on quality, cost, and reimbursement
- ▶ Improved visibility and control over practice patterns, schedule adherence, supply contracts and team deployment; find opportunities for greater efficiency and cost savings
- ▶ Improve cycle time, reduce the effort at assembling, generating, and disseminating reports and analytics

Healthcare Issues

- ▶ Reducing and controlling total costs of care across diverse care settings
- ▶ Ensuring quality, safety, access and compliance
- ▶ Increasing patient volume, referrals, and total revenue
- ▶ Integrating large, diverse sources of internal and external data
- ▶ Patient and physician satisfaction

Looking Ahead

- ▶ Patient Centric Healthcare
- ▶ Electronic Medical Records
- ▶ Service Line Model for Healthcare
- ▶ Accountable Care Organizations (ACOs)
- ▶ Meaningful Use (MU)
- ▶ ICD-10 Code Set Implementation
- ▶ RHIOs, HIEs
- ▶ 837 EDI Claims – v5010 Implementation

Healthcare

Healthcare Analytics: A Proven ROI

Objective	Solution Components	Benefits
Increase Service Line Profitability	Accurate, near real-time data on costs for: <ul style="list-style-type: none"> ▶ Materials (supplies, implants, trays/packs) ▶ Labor (MDs, RNs, Techs) ▶ Equipment (C-Arm, da Vinci, Laser) ▶ Facility (room, water, electricity) 	Compute the total cost of surgery by: <ul style="list-style-type: none"> ▶ Facilities, care settings, departments ▶ Surgeons, teams ▶ Procedures, cases ▶ Suppliers of implants, medical devices
Manage Range of Variation Across Surgical Teams...	Standardize common supplies used	<ul style="list-style-type: none"> ▶ Reduce inventory on hand ▶ Improve leverage in vendor contract negotiations
	Track procedure time stamps	<ul style="list-style-type: none"> ▶ Increase OR utilization, Patient Volume, On-Time Starts ▶ Decrease Room Turnover Time, Patient Wait Time
	Create surgical profiles by patient type for individual surgeries	Enable more accurate open and block scheduling
	Develop process models that integrate Lean principles and drive process efficiency	<ul style="list-style-type: none"> ▶ Decrease cycle times for repeatable processes ▶ Determine variations in care ▶ Improve buying leverage with vendors for cost savings ▶ Identify, model, and institutionalize best practices
	Increase use of common processes and materials when building IT infrastructure	<ul style="list-style-type: none"> ▶ Decrease redundancy in work required for building out technical IT infrastructure ▶ Increase additional data sets
	Integrate market share data	Align with market growth opportunities
	...Grow Patient Volume Maintain up-to-date and accurate preference cards for surgeons	<ul style="list-style-type: none"> ▶ Increase physician satisfaction ▶ Identify supply consistencies by surgeons and procedures ▶ Improve on-time first case starts and follow-on case starts
Improve Access and Use of Information: Performance, Quality, Compliance	<ul style="list-style-type: none"> ▶ Design an enterprise data warehouse (EDW) to support standardize reporting and analysis ▶ Automate manual report generation ▶ Integrate clinical, financial, operational data 	<ul style="list-style-type: none"> ▶ Reduce time spent finding and collecting data ▶ Increase accuracy and timeliness of reporting ▶ Improve and expedite audit preparation ▶ Reduce the number of staff required for network reporting ▶ Reduce the variation measure definitions ▶ Decrease the cost of clinical decision support and the turn-around time on analytic reporting requests

"Bringing together critical data on surgical scheduling, materials, labor and outcomes into an integrated BI framework is having a dramatic impact on our performance improvement and cost reduction programs."

-- VP, Enterprise Informatics

EDGEWATER
TECHNOLOGY

20 Harvard Mill Square
Wakefield, MA 01880
P: (800) 410-4014
edgewater.com
makewaves@edgewater.com