

OR Utilization Analysis

Optimizing Scheduling and Utilization through Analytics

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Agenda

- > Introductions
- > About Milford Regional Medical Center (MRMC)
- > What was the problem with measuring OR utilization at MRMC and what solutions were sought
- > AcmeWare's strategy for working with Microsoft Power BI and how it was applied at MRMC
- > What MRMC wanted to measure with Power BI analytics and why
- > Demonstration of solution in production today



Milford Regional Medical Center



- > 148 bed nonprofit acute-care facility serving a region of 20-plus towns located in an outer suburb of Boston, Massachusetts
- > Full service surgical center that provides a range of services: General Surgery, Neurosurgery, Orthopedics, Thoracic, Robotic etc.
- > Milford has 8 Operating Rooms, 2 C-Section rooms, and 6 ENDO rooms all using Surgical Services.
- > Milford uses MEDITECH Expanse 2.1 Priority Pack 36



The Importance of OR utilization

- > The OR is a revenue generating financial hub
- > An efficiently run OR has direct impacts to the financial wellness of any hospital
- > Utilization data is critical to ensuring that the operating room is efficiently staffed and fully optimized
- > Maximizing OR efficiency has important implications for cost savings, patient satisfaction, and medical team morale



Why MRMC Chose Acmeaware

- > Acmeaware has 25 years' experience using MEDITECH Data Repository for report writing, including working with Microsoft Power BI
- > OR Utilization data is challenging to work with, particularly block utilization.
- > MRMC agreed to be a beta site for Acmeaware and work collaboratively on OR Utilization reports and visualization development
- > Acmeaware included training on Microsoft Power BI



Why Microsoft Power BI?

- > Ubiquity – Over 5 million subscribers (over 100,000 companies) are currently embracing Power BI for modern business intelligence
- > Availability of Development Information: Over 1.5 million YouTube videos on how to work with Power BI
- > Cost: Power BI Desktop development environment is free. Access to Power BI Service, where reports, visualizations & dashboards can be deployed and viewed can be accessed with a Power BI Pro license (currently \$10/month)
- > Ease of Dynamic Analytics: Power BI empowers decision makers to explore data, trends, anomalies, and
- > Outstanding Visualization & Dashboards: charts, graphs, matrixes, dashboard, paginated reports, and much more (open-source development)

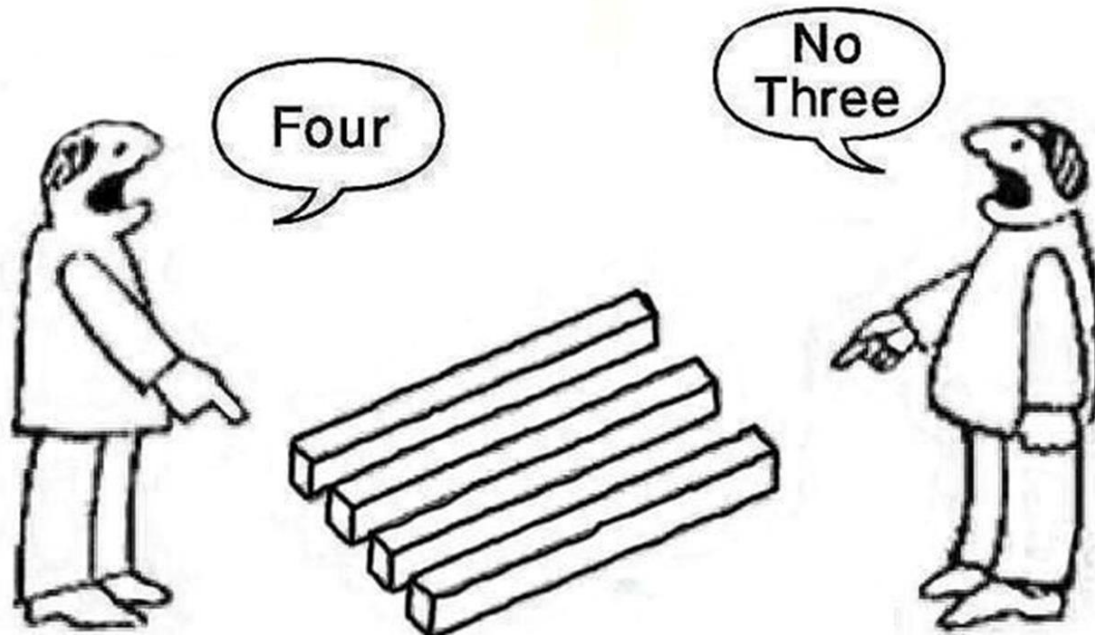


Acmeaware Power BI development

- > Recognize Power BI is designed to function best with a normalized database, of which the DR is not!
- > Use our experience to identify the OR scheduling data within the DR
- > Designed a normalized datamart schema for our datamart(s)
- > Implement and Extract Transform Load (ETL) process
- > Update our Power BI data model (.PBIX) and used PowerBI Gateway
- > In close collaboration with MRMC OR staff, build PBI reports, visualizations, and dashboards to meet their objectives



Agreeing on what to Measure



OR Resource Optimization Analytics

- > Case Count (primarily used for data validation)
- > Room Utilization (Actual & Scheduled)
- > Block Utilization (Actual & Scheduled)
- > First Case Analysis
- > Delay Reason Analysis
- > MD Delayed Cases



A critical design constraint was that all reports, visualizations, and dashboards must have the capability to drill-down to the constituent Block and Case details for validation purposes.

OR Scheduling Analytics Demonstration





Keep in touch!

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