



DEMAND LOGIC®

Case Study

An Academic Health Systems' Proactive Approach to Demand Planning for a New Tower



Academic Medical Trauma Center

- General practice to specialized surgery
- Replenish 42 hospital supply rooms daily (7 days/week)

The Challenge

A 100+ year-old, large multi-facility University hospital in the South was months away from opening a new hospital tower with several new acute care patient areas; however, replicating current inventory and replenishment practices in the new tower was not an option. The current hospital supply areas had:

- Frequent stock-outs
- Clinicians chasing down needed supplies
- PAR levels based on "best guess"
- Poor utilization of storage space
- Urgent workaround orders
- Inefficient replenishment activities

Realizing that this problem wasn't going away, the University hospital added inventory and space optimization as a key initiative. The University hospital has experienced long term success via its ability to quickly respond to unique healthcare industry complexities. Knowing that innovation is a pre-requisite to building a state-of-the-art supply chain, the University hospital leadership understood the importance of identifying and adopting new technologies to proactively address its inventory challenges with a different approach.



The Solution

University hospital leadership decided on a **datacentric approach** to proactively plan for the new tower supply rooms based on forecasted demand to eliminate stockouts, establish appropriate inventory levels, improve workflow efficiency, and decrease clinical time spent on supply chain activities ultimately leading to higher clinician and patient satisfaction. The hospital asked Ron Denton & Associates (RDA) to provide its cloud-based demand planning software, Demand Logic®, to reduce clinical involvement, optimize inventory levels,

develop consistent supply storage layouts, and calculate inventory and space needs for the new tower design. RDA worked closely with the University hospital's Supply Chain department to implement Demand Logic®. Initial efforts focused on a comprehensive data gathering process. Once the data was received, Demand Logic® was used to enrich the hospital's

data and incorporate estimated inventory needs at the facility, cost center, and bin location. As a result of the initial analysis, Demand Logic® provided key opportunity insights into the greatest opportunity areas. In addition, dimensional data was utilized within Demand Logic® to determine the associated supply storage space requirements, allowing a properly planned supply storage design for the University hospital’s future needs. In addition to inventory and supply optimization, RDA also worked collaboratively with key supply chain and clinical stakeholders to customize the ordering and replenishment processes and align supply and demand sequencing. RDA was able to facilitate this process with their best practices guidelines and provide key stakeholders with an opportunity to have buy-in on changes to the processes.

The Benefit

Datacentric Transformation

As a result of Demand Logic® the University hospital was able to proactively plan for the new tower and achieve optimal layout, optimal inventory levels, in rapid time, with quantitative information versus subjectivity. The University hospital now has a sustainable tool to achieve sustainable results and continual optimization.

- Increased available space for critical supply needs
- Reduced product touches by 50%
- Reduced clinical supply activities by ~>50%



The Result

Opportunity Description	Annual POU Improvement	Annual Savings Achieved
Product Availability	95% availability improvement	Materials Labor Savings \$125,000
Stock-out Reduction	85%	
Replenishment Line Reduction	35%	

Demand Planning & Beyond

Keeping up with the demand of a product is critical in health care; Failing to do so can result in severe repercussions with negative patient outcomes, poor use of valuable hospital staff time, erosion in clinical confidence in the supply chain, and increased hospital costs.

Demand planning helps to stabilize and minimize upstream supply fluctuations (i.e., bullwhip effect). The use of a robust data collection and normalization process combined with statistical analysis and modeling results in improved collaboration with suppliers and distributors, as well as providing a high confidence of product availability with clinical stakeholders.

As a cloud based collaborative tool, Demand Logic®, has the ability to connect more supply chain participants and provide fine tuning over the movement, timing and replenishment of products. To achieve the highest level of improved planning for demand-driven supply chain that is more responsive to actual end user demand, data needs to be collected at or as close as possible to point of use. Improved planning equates to improved bottom lines.



Healthcare Supply Chain Services

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