

Achieving Dramatic Clinical Product Savings

Supply Chain Process Redesign Requires Organizational and Technology Enablers

An Academic Medical Center Case Study of Diligence, Patience & Building Credibility

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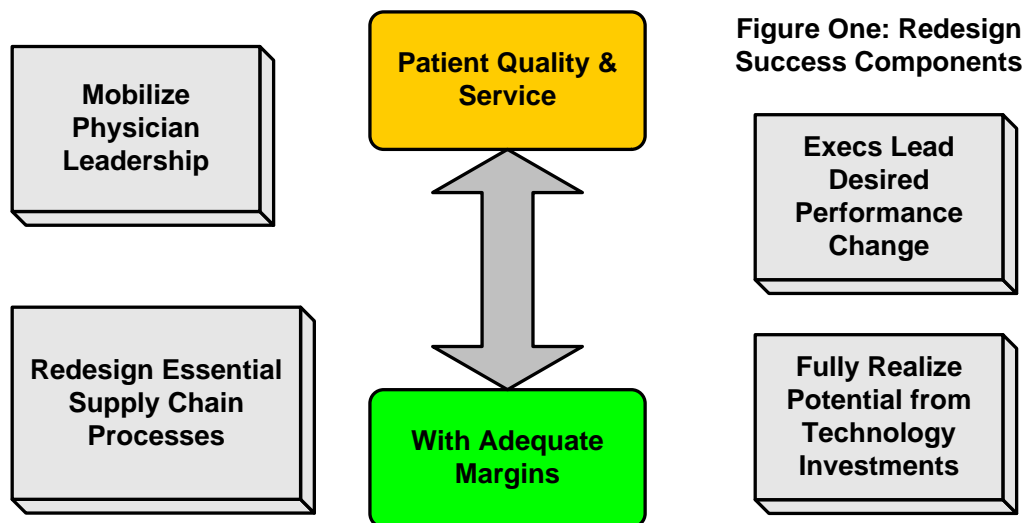
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Virginia Commonwealth University Health System (VCUHS) is a 780 bed medical center with 30,000 annual admissions and a Level 1 Trauma center (ED visits total 80,000). Based in downtown Richmond, Virginia, the hospital serves a high acuity population with a relatively poor payer mix. Yet new technologies and space requirements required a large capital infusion for new surgical, cardiology, and inpatient bed facilities. A new CEO, a strong medical director, and augmented materials management capabilities determined that supply chain process improvements could help pay for the new building. This case study follows the ensuing initiative.

The new CEO and the medical director sponsored several very helpful processes to build MD partnerships. A supply chain assessment provided a comprehensive understanding of process, policy, organizational, technology and other issues that blocked cost-effective performance. Quantitative findings confirmed opportunities of 10% or more and helped focus on the particular areas where efforts could have a high payback. The action plan that resulted addressed four issues: redesigning supply chain processes, mobilizing physician leadership, realizing potential from technology investments, and executives leading desired performance change (see Figure 1).



Process Redesign

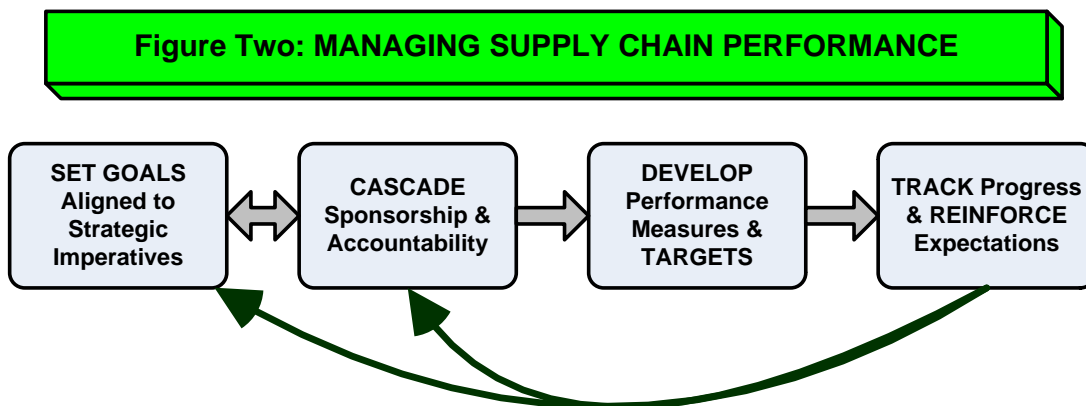
The assessment cataloged process issues within a hierarchy of five major groupings (i.e. Inventory Management and Replenishment). Some opportunities were internal to materials management itself; while, others involved service and reliability to users.

One helpful initiative was the development of “Service Level Agreements” (SLA’s). SLAs focused on clarifying existing policies and procedures that provided Materials Management and/or Purchasing with required information through the correct channel. In addition, these agreements enabled groups to commit on realistic service expectations such as the delivery time for a stat item from CSR. In turn, service levels, reliability metrics, and means of problem-solving were specified.

Not surprisingly, until basic service processes work well, it is hard to obtain support and total cooperation from clinical users. An excellent example occurred when the clinical resource manager began working with the EP Lab. The old ordering and payment approval process was convoluted and time-consuming causing delays, vendor dissatisfaction, and higher inventories. Multiple signatures were required for each individual requisition for implants used virtually everyday. The largest vendor had an outstanding billing in excess of \$1,000,000 that was 90 days old with some bills over a year old. Clearly, this process needed to be reworked and made more efficient. Once streamlined, vendor payments became timelier.

Organizational Enablement

Even the best materials managers need help from senior leadership. The game plan developed for VCUHS created pro-active support in several dimensions. This, in turn, prompted desired process changes (see Figure 2).



The CEO worked effectively to develop physician partnerships and shared his vision that savings in the supply chain could translate directly into funding the new building and key technology. He listened, encouraged highly motivated, community-minded leaders, and was open to joint ventures of merit.

Expectations were set and communicated broadly, and metrics were developed and measured regularly. Additionally, accountabilities with legitimate urgencies, were clarified, formalized, and articulated clearly. VCUHS understood that strategic imperatives credible with important stakeholders would improve success. When the strategic purpose has benefits to patient care and

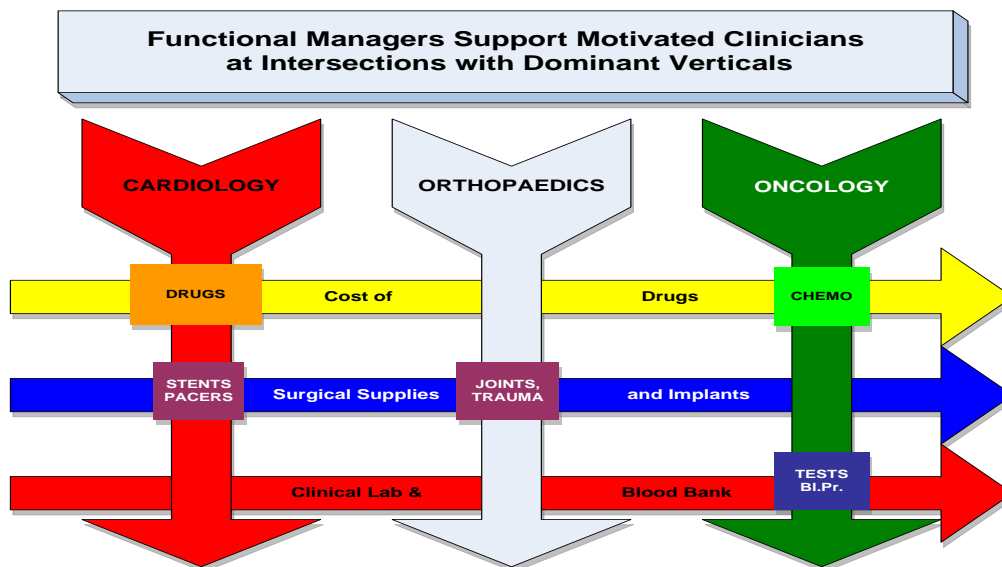
especially to medical staff programs there is more likelihood of partnership around shared goals. Supply chain initiatives that move beyond “low hanging fruit” usually require behavior changes and other difficult transitions. Hence, the level of urgency must offset inevitable resistance.

Mobilizing Physician Leaders

Top management sponsorship played a critical role with the EP lab process changes mentioned earlier. The system’s chief medical officer (CMO) made the introductions and set the expectations. The CEO then spent time building respect and studying the specific needs in each area. He kept the CMO updated on issues larger than the lab’s specific sphere of influence and looked to him for assistance when needed. The Chair of Cardiology was also enlisted and began providing active support.

The key to building medical staff support was developing accurate information. Physicians responded well to objective facts. Quickly detecting flaws, they would have become disengaged if material errors had surfaced (particularly in public). The lesson here is making sure all data is verified and rechecked for accuracy. Also, instead of pushing a “best” approach, the medical leadership was allowed to choose from different options. Doing this, led to buy-in with significant results in 6 months.

The medical center worked through clinical leaders. Functional managers, like pharmacists, lab managers and purchasing cannot succeed alone; teaming with motivated physicians at key product use points is essential. An emerging approach, sometimes called clinical resource management (CRM), addresses supply and drug expense within the larger context of meeting net revenue margin per case. Creative investigation and problem-solving seek the best care processes to deliver high quality care at the lowest possible cost. Gradually changing individual practice patterns takes time, but is more effective.



Enabling Process Redesign and Strategic Goal Attainment through Technology

In theory, information technology and various investments in automation should enhance existing processes, add to available information and improve service delivery. This requires that users are

thoroughly trained and motivated to use new functions and features, that available modules are fully integrated and that new acquisitions (IT or logistics technology) fit a strategic plan. Unfortunately the realities at VCUHS fell short. Fortunately, the hospital has now committed to a new information system which will reverse many of these obstacles.

Conclusion

The results to date have been encouraging. At the end of year one savings exceeded \$5,000,000 compared to the goal of three million. Year two saw continued progress, and the original three-year goal of \$9,000,000 is within reach. The goal for the next 18 months is saving an additional \$5,300,000 and reducing one-time inventories by \$1,200,000. Physician leaders have remained engaged and are seeking additional ways to reap savings.

Figure Four: Full Redesign Model

