



WHITE PAPER

How to Overcome **the Three Barriers to Continuous Improvement in Healthcare**

 **tecsys**[™]

Continuous Improvement: A Healthcare Imperative

Hospitals and health systems everywhere continue to seek new ways to reduce costs while improving patient outcomes. In today's environment of shrinking margins, changing reimbursements, and new population health concerns, doing things the way they've always been done simply doesn't work. The new imperative is continuous improvement, particularly for the healthcare supply chain. Organizations that fail to embrace this mantra may struggle to remain competitive in the years to come.

Lean Principles in Healthcare

Although the principles of Lean evolved from manufacturing in the automotive industry, many healthcare organizations have successfully implemented these practices to transform how they operate. Below is a definition from a Mayo Clinic article called "The Promise of Lean in Healthcare".

Lean is defined as "an organization's cultural commitment to applying the scientific method to designing, performing, and continuously improving the work delivered by teams of people, leading to measurably better value for patients and other stakeholders."¹

In theory, most organizations aspire to continuously improve how they run on a day-to-day basis.

The Materials Management Challenge

One critical aspect of continuous improvement lies with materials management. The variety of products spread in many different storage locations and supply rooms from different departments across a hospital creates a multiplication factor. This can translate into having to manage locations for thousands of products—without even considering specialty items from procedural areas. Without having a strong grasp on what's stored where and the associated consumption data, you lack the visibility needed to improve this entire process.

Lean practices promote visibility to issues and barriers and help you move from a culture of negativity and finger pointing to one of proactively identifying challenges and working together to fix them.

1. Toussaint, J. S. and Berry, L. L. (2013) *The Promise of Lean in Health Care*. Mayo Clinic Proceedings. Retrieved from [https://www.mayoclinicproceedings.org/article/S0025-6196\(12\)00938-X/pdf](https://www.mayoclinicproceedings.org/article/S0025-6196(12)00938-X/pdf)

Common Barriers to Implementing Continuous Improvement

Many organizations strive to embrace Lean practices and reap the benefits of continuous improvement. So, what's stopping them? As it turns out, quite a lot.

Barrier 1: The Culture Barrier

Many are familiar with the dictum that “Culture eats strategy for breakfast.” An organization’s culture needs to support the strategy, and not the other way around. In many healthcare organizations, there is a culture of negativity. No one admits mistakes, and no one escalates issues to leaders. Problems within materials management could include incorrect orders or failure to capture demand, not having the right supplies on hand, etc. Too often a strategy is defined as a set of goals that are communicated downward as operational objectives with limited explanation about how to achieve them. There is no talk of the cultural attributes required to create and support the strategy that ultimately can achieve the goals.

How to Overcome It

A culture of continuous improvement is about empowering frontline staff to feel comfortable identifying issues and escalating them. This establishes better visibility and highlights the roadblocks to be addressed in a structured framework that ensures ongoing frontline engagement. Building a positive culture is the best way to move forward when it comes to success related to both supply chain and patient outcomes. Performance will improve when the supply chain has an important role and can drive the quality of care and service. Supply chain professionals have to have a seat at the table to be heard, and everyone needs to be invested in this change.

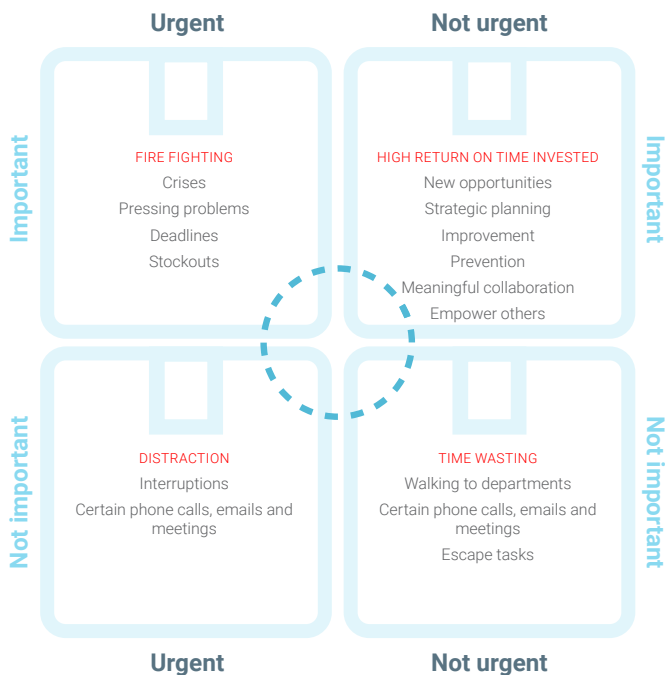
Barrier 2: The Strategy Barrier

A key aspect to the role of the materials management leader is to break down strategy into tactical plans and instill cultural attributes in the team to achieve organizational goals. However, there tends to be limited strategy defined for materials management as part of the broader strategy because supply chain is not well represented in the strategic planning process. Oftentimes, only savings goals are passed down, and the existing operational conditions force personnel into the fire fighting quadrant of Stephen Covey's Time Management Matrix from "The 7 Habits of Highly Effective People" (shown below).

This leaves a void in materials management's ability to define strategy and empower a culture of continuous improvement at the tactical level. Because of this, each department tends to manage their supply chain activities in a vacuum. Materials management only deals with commodity/med-surg supplies, not high-value items in procedural areas.

How to Overcome It

The idea of the matrix is that the more time you spend in the important/not urgent quadrant, the less time is required in the fire-fighting quadrant with its distractions and time wasting. This means supply chain leaders need to be embedded in the strategic planning process of the organization. They can align direction and change the operational premise by focusing on the important/not urgent quadrant to break the status quo. In this way they can become a driver of continuous improvement and not be restrained by continuous fire-fighting.



Barrier 3: The Technology and Data Barrier

Ultimately, you don't know if you are improving if you don't measure progress; but you can't measure progress without data. Inventory management is a key aspect to materials management and is typically done through a variety of fragmented point solutions and manual, paper-based workflows with inconsistent data capture compliance. There could be a hemodynamics system for cardiac products, an ERP for med-surg supplies, a different system in the lab for reagents, etc. There's no clear chain of custody for high-cost, critical items and no holistic view across all inventory—where it's located, when it's consumed, and who is using it.

This leaves silos of information with inaccurate data in addition to critical data gaps, preventing a holistic view across all inventory. Lacking this 'single source of truth' becomes a critical barrier to supply chain performance improvement, as confirmed in recent surveys of healthcare supply chain leaders. In a 2016 healthcare supply chain insights report², respondents were asked about their challenges. The three challenges leading the list are related to the IT environment and the difficulty in making data capture part of everyday workflows. Some of this points to the fragmented IT landscape at many organizations where there are disparate systems in use that make consistent data capture and end-to-end visibility a challenge.

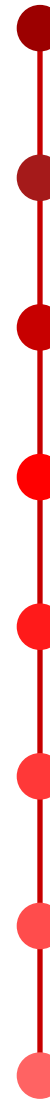
In a 2017 survey³ of chief purchasing officers, these top barriers to improve supply chain performance were reiterated. Respondents' main concerns were:

- Lack of advanced technology and a lack of resources and staffing (tied for the top barrier)
- Lack of timely and accurate point-of-use consumption data
- Other major barriers: lack of executive support to invest in supply chain capabilities; lack of centralization and authority; and metrics not driving total enterprise supply chain performance

How to Overcome It

It's important to have a system that not only integrates with the ERP/MMIS but can also maintain detailed product usage information and then push supply orders that mirror demand. But this can't happen if the data on what's consumed at the point of use isn't captured. Accurate data is the key and requires non-disruptive data capture technology that can ensure compliance. Each department will have different requirements for which technology works best based on the supply types consumed.

Most Challenging

- 
- **Challenges with data capture compliance within the IDN**
 - **Access to reliable information**
 - **Multiple information systems that are not connected or integrated**
 - **Lack of common definition / practices**
 - **Lack of external benchmarks (other reported metrics from Health systems for comparison)**
 - **Availability of bandwidth and talent**
 - **Lack of IT capabilities**
 - **Lack of executive attention and support**

Least Challenging²

2. *Health System Supply Chain Insights 2016*, Jamie C. Kowalski, Jamie C. Kowalski Consulting LLC and Lorcan Sheehan, PerformanSC Supply Chain Limited, research sponsored by Tecslys, July 2016

3. *Chief Purchasing Officers on the State of the Healthcare Supply Chain and CFO Perspectives on the Healthcare Supply Chain*, research sponsored by Tecslys, prepared by the AHA Health Forum, Dec 2017

The Keys to Success:

Visibility and Control

The good news is hospitals are beginning to understand how to overcome the three barriers keeping them from supply chain success. This includes gaining complete visibility into supply usage for each and every location on every floor of the facility and then taking this information in aggregate to make more informed purchasing decisions.

You Can't Manage What You Can't See

Poor inventory management at the point-of-use can result in:

- Inconsistent alignment of par level reorder points
- Excess inventory and waste due to expiration
- Labor-intensive demand assessment resulting in disruptive stockouts and urgent orders
- Nurses too involved in inventory-related activities
- Inability to control and monitor demand variations
- Manual requisitions for special orders and consignment items
- Ineffective use of space with disorganized supply locations

Gaining control and visibility of inventory movement and supply usage at the department level helps with standardization and reduction of non-conforming products. Automation at the point-of-use can allow the number of products managed by the supply chain team to be increased while still reducing duplicate SKUs and similar items.

Alleviating the Burden on Clinical Staff

There is often considerable involvement of clinical staff in medical supply requisition and replenishment activities on nursing units. Many manual processes exist that depend heavily on nursing personnel evaluating supply needs and putting away delivered supplies. Replenishment processes should be transparent and seamless for clinicians regardless of whether it is a stock or non-stock item. The supply chain team should not only focus on managing the commodity med-surg supplies but also be involved in the reordering process of direct buys. By including these items in the supply chain distribution program, your organization opens the door to process improvement and product standardization. You can also better evaluate new products to be introduced. This avoids duplication of similar items and allows replenishment activities to be combined to better serve end users.



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Looking Ahead

Maintaining the status quo is rarely an option in the supply chain world, and this is even more true in healthcare with its fast-changing requirements and the speed at which new supplies are available. Building a top-performing materials management department requires a positive culture that encourages feedback in addition to strategic clarity adopted through a continuous improvement framework. These must be paired with data consolidation and sustainable data integrity ensured through non-disruptive data capture that achieves the lowest-possible compliance risk.

Throughout your organization, every department—the OR, Cath Lab, Pharmacy, and individual nursing stations—all have different requirements and workflows. Inventory management for a bandage is far different than what’s needed to document and track the chain of custody for an implantable. Those differences aren’t going to change, so it’s critical to find a point-of-use inventory management solution flexible enough to handle diverse needs—and handle them well. Adding more point solutions will just exacerbate an already unwieldy situation. It’s essential to accommodate each department’s needs for managing locations and their different approaches. Only then can end-to-end visibility and control become possible, and with them a solid foundation for continuous improvement.

Examples of the types of gains that are possible through continuous improvement:

Performance Metrics	Improvements
Clinical involvement	-55% to -80%
MM involvement	-36% to -80%
Stock-outs	-90% to -98%
Inventory value	-20% to -53%
Expiries	-37% to -75%
Lines generated	-20% to -45%
Replenishment	-25% to -78%
Annual orders	-25% to -55%
Storage gains	-25% to -43%

About **Tecsys**

Since our founding in 1983, so much has changed in supply chain technology. But one thing has remained consistent across industries, geographies and decades – by transforming their supply chains, good organizations can become great.

Our solutions and services create clarity from operational complexity with end-to-end supply chain visibility. Our customers reduce operating costs, improve customer service and uncover optimization opportunities.

We believe that visionary organizations should have the opportunity to thrive. And they should not have to sacrifice their core values and principles as they grow. Our approach to supply chain transformation enables growing organizations to realize their aspirations.



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