



Supply Standardization:

The Clinical and Economic Benefits
of Reducing Waste in the Supply Chain

Hundreds of thousands of dollars' worth of supplies – from bandages to surgical instruments – flow through hospitals and health systems each year. The average hospital has from 6,000 to 8,000 stock keeping units (SKUs) on-site but may actually carry as many as 35,000 SKUs on the books at any given time, according to one estimate.¹ In most healthcare organizations, supply chain costs consume approximately 30 percent of the total operating budget, second only to labor costs.² By 2020, some experts expect medical supplies to surpass labor as the biggest expense for hospitals and health systems.³

As health systems strive to meet the demands of value-based healthcare delivery, managing the cost and quality of these supplies has taken on primary importance. In a 2012 survey of healthcare executives, nearly 80% said that reducing medical and surgical-supply costs was a formal part of their organization's strategic plan.⁴

In the quest to improve supply chain management, standardization is emerging as a valuable tool. Standardization within an individual facility and across a system can help the organization select best-in-class products, drive optimal clinical practices, reduce waste, and increase its buying power. Healthcare managers are finding that, properly implemented, standardization measures can help them improve the quality and consistency of care, reduce patient risk, increase efficiency, and reduce costs.

THE MANY FACETS OF STANDARDIZATION

The term “standardization” encompasses a number of different practices. Among them:

- reducing the number of SKUs to create a leaner inventory
- developing set policies and processes around supply management, from product selection and ordering to distribution and disposal
- specifying a limited group of vendors to provide all supplies, thus reducing SKUs and creating the opportunity for volume discounts
- defining and enforcing clinical protocols to be used across the system, also known as clinical standardization

Generally speaking, standardization has four components:

Product selection – Analyzing the supplies used in different procedures to settle on those that deliver the optimal price-quality value.

System-wide standardization – With the growth of community-based healthcare delivery, health systems have the added complexity of setting up systems to manage supplies outside of traditional acute care locations.

Standard clinical practices – In addition to creating robust policies and processes around supplies, it is also common to more closely define how certain procedures are performed from a clinical perspective, in an attempt to produce consistent patient outcomes.

SKU reduction – Hospitals and health systems generate millions of tons of medical waste each year, much of it unused medical supplies. Part of the problem is the proliferation of redundant, unused, and expired supplies. In addition, each SKU has a carrying cost associated with it, whether it is being used or not. Whittling the list down to only the most critical SKUs can help reduce an institution's carrying costs.

THE HIGH COST OF HIDDEN STANDARDIZATION ISSUES

In working with hospitals and health systems on supply standardization, 3M reviewers frequently encounter scenarios that can mask costly problems.

The eternal Lawson cycle.

Until all products are depleted, a Lawson number can't be removed. Employees see the number and keep ordering supplies that are targeted for elimination, creating a vicious cycle.

Like hospitals. Unlike usage.

Data showing a wide variance of product usage among facilities of similar patient demographics and acuity levels suggest a standardization issue.

Different product through kit channel.

Make sure any products on which you've standardized, are the same products included in your kits.

Coding is key.

Are you seeing all of product X in your system? If both masking and medical tapes are coded as "tape" it is difficult to extract medical utilization unless you know the SKUs.

More versions. Less mastery.

Buying different brands of a similar product may be wasteful in terms of cost and clinical competency. A New Jersey hospital found that of two similar products, product A was applied correctly to patients only 36% of the time, while product B was applied correctly 84% of the time.⁶

Using two instead of one.

Many institutions may be using two products when the job can be done with just one. It is also worthwhile to look at products that could help proactively prevent conditions – thereby eliminating the need for products that treat the condition.



MULTIPLE VIEWPOINTS TO CONSIDER

Professionals throughout a health system have vital, complementary roles to play in supply standardization efforts. Supply chain professionals contribute domain expertise on the economic and logistical issues involved in product procurement and distribution. Quality professionals focus on reducing variability in clinical practices and mitigating the risk of improper supply usage. Clinical teams are concerned with providing the best patient outcomes possible and supporting the development of user competencies.

Value analysis teams consider all of these issues in analyzing the suitability of a given product for a given care area: Does it support quality outcomes? Does it provide the best clinical value? Will it help staff be more efficient? What training is required? In the final analysis, will this product in comparison to others in the same class, be the best choice to help us deliver high quality, cost-efficient healthcare?

THE MISSING INGREDIENT: UTILIZATION

Supply standardization is only part of the equation. Managing utilization – making sure supplies are being used in the specified way, in the right amount, under appropriate circumstances – may be even more critical to reducing costs and achieving desired clinical outcomes.

During analysis of consumption patterns, it's common to discover a mismatch between an institution's clinical protocols and its supplies. For example, a dressing may have a seven-day wear time according to manufacturer specifications but the facility's clinical protocol is to replace dressings every three days. Armed with this knowledge, the value analysis team has the opportunity to either revise the policy so the product can be used to its full potential or select a different, shorter-duration product typically at a lower cost. Either way, aligning products to protocols can help the organization reduce waste, right-size inventory, and control costs.

Another typical observation is that product usage at one facility or in one department exceeds the utilization norm for that product across the organization. This may be due to process variations, gaps in training, or other factors. Tracking utilization enables managers to identify problem areas and quickly intervene with process improvements, more effective training, or other solutions to get usage back in line.

Focusing on both standardization and utilization gives health systems a powerful way to tackle escalating supply costs, while improving quality and performance. In considering the potential benefits of this approach, the following calculation from the Association for Healthcare Resource & Materials Management is instructive. For an organization with a 2 percent operating margin, one dollar (\$1) of expense reduction is worth \$50 in gross revenue – which means that \$100,000 in supply chain savings is equivalent to \$5,000,000 in gross revenue.⁵

Conversely, organizations that lag in applying best practices for standardization and utilization will accumulate a crushing inventory burden of supplies that are duplicative, out of date, and not aligned to clinical practices. This creates waste, drives up costs, introduces risks to patient care, and drags down both operational and clinical efficiency. In addition, as analytics become increasingly important in making strategic decisions about supply chain management, the proliferation of products may make it difficult to draw meaningful inferences from the data.

OVERCOMING THE CHALLENGES

Even with the best intentions, supply chain standardization can be challenging. While all stakeholders may agree that it is a strategic priority for the organization, execution can be difficult to navigate.

Among the major challenges:

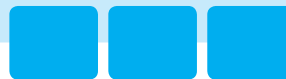
- **Managing clinician preference** – It's vital to engage and support clinicians in the supply standardization process. As the primary users, their opinions need to be factored into the selection process to find products that balance quality, clinical effectiveness, availability, and cost. Some clinicians assume that standardization means agreeing to use a lesser quality product. Many fear upsetting clinical routine and confidence by working with an unfamiliar product. Overcoming these and other concerns can be eased by taking a collaborative approach involving clinical stakeholders, providing comparative data on product effectiveness and patient outcomes, and providing reassurance that enabling quality patient care is paramount.

Goal: Global Standards in Healthcare

3M is proud to be among thirty global healthcare leaders – hospitals, manufacturers and distributors from around the world – that have endorsed the GS1 System of Standards for Healthcare.

According to McKinsey and Company⁷, the application of universally-accepted barcoding standards for medical products has the potential to:

- Reduce medication errors, saving as many as 43,000 lives each year and billions of dollars in healthcare costs.
- Enable greater supply chain efficiencies leading to improvements in inventory management and business processes that could save \$30-40 billion globally each year.



- **Realigning product formulary** – Over time most hospitals have accumulated a massive product master which may include duplicative or outdated supplies. Standardization requires identifying each product, determining its correct usage, and cross-referencing it against other similar products to create a baseline for standardization discussions.
- **Changing clinical practice** – To achieve full benefit from standardization, clinical staff may need to adjust how they work. This may require the development of new protocols, policies, and processes related to how products are used in the clinical setting – and change management, training, and compliance monitoring to encourage and sustain adoption of these new practices.

3M: YOUR PARTNER IN STANDARDIZATION

Years of experience underscore our belief in standardization as an important methodology to help healthcare providers ensure quality and control costs.

Standardization drives a lean, more manageable inventory. It also helps reduce variance in care delivery, simplifies training, and contributes to a more confident and competent staff. Standardization lays the groundwork for utilization improvement to enable providers to realize even greater cost savings and quality benefits.

We work with hospitals and health systems to help them capture the clinical and economic benefits of product standardization. This collaboration typically includes:

- Applying our clinical expertise to cross reference SKUs within and across vendors so that value analysis teams have the data needed to select products that will address broad and niche clinical needs, as well as the financial objectives of the organization.

- Helping institutions match their protocols with recommended clinical practices and implementing these practices across the delivery network.
- Providing educational resources and in-service training to support adoption of new protocols and products.

While there is agreement that standardization is an important strategy to achieve clinical and financial goals, it's often more difficult to implement across a system than one thinks. While any change requires diligence and perseverance, the culture of standardization permeates an organization and touches almost every staff member and patient. Because of this, it is critical that it be done purposefully and in a way that “hard codes” the changes within the organization. Only then, will the benefits of standardization continue throughout the future.

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