

Changing the “Game” of Custom Procedure Trays

Earlier this year, Sisters of Mercy Health System began producing its own custom procedure trays (CPTs) through the organization’s supply chain division—and has already reduced its overall CPT costs by 20 percent.

Over the years, custom procedure trays (CPTs) have become a staple for procedural areas in U.S. hospitals. According to the Health Industry Distributors Association, CPTs represent the largest distributed product line for medical-surgical product distributors. When properly designed and managed, a strong CPT program can lead to efficiencies in many areas of healthcare organizations.

The idea behind CPTs is simple: Purchase the commonly used supplies required for a surgical procedure and bundle them into a kit. In theory, doing so will reduce inventory management costs associated with handling individual supplies, the cost of picking those supplies for surgery, the time it takes to set up a procedure room, and the waste from all the packaging used in single-sterile products.

Unfortunately, this is not always how things work in the real world, where hospitals often struggle with the complexity of managing a CPT program. Sisters of Mercy Health System in Chesterfield, Mo., took a close look at its CPT program a few years ago and explored alternatives through ROi, the health system’s supply chain division. The resulting initiative has led to savings in excess of \$1 million on CPTs, with a savings-per-pack ranging from 0 percent to 70 percent.

Taking a Closer Look

Mercy’s 20 hospitals had been using CPTs for many years, and each of the health system’s 21 hospitals was managing its own unique pack program. There

was no common methodology across the system for effective CPT use. As a result, some hospitals had packs for every procedure, while others had virtually no packs at all. In addition, there was no structure for appropriate management of components within the packs, which resulted in widespread component waste and packs that were not being used to capacity.

Upon investigation, the reason for the variation became clear: Many of Mercy’s hospitals simply did not trust their CPT vendor or the CPT industry in general. This is because CPT vendors often strive to increase sales and improve margins through the addition of unnecessary components to packs, substitute in self-manufactured components without notification, and take too much time to implement pack change requests.

Within Mercy’s system, this was not a winning combination. After many years, this dynamic led Sisters of Mercy to commission ROi, its supply chain division, to explore alternative options. The first thing ROi did was conduct a Six Sigma project at one of Mercy’s ambulatory surgery centers (ASC). Excess components found in CPTs used at this ASC were collected over a four-day period and analyzed. The findings were startling. The waste of products in the CPTs—which always were thrown away without use, but always were paid for—revealed that Mercy’s CPT program was in need of a major overhaul. The Six Sigma study revealed that an average of six items per pack—at an average cost of \$30.71—were never used and were thrown away.

Game-Changing Decision

Upon conclusion of the Six Sigma project, ROi set out to examine three distinct options:

- > Mercy could remain with its current CPT vendor, but put more stringent management controls over the program.
- > Mercy could convert to another CPT vendor.
- > Mercy could build and operate a self-manufacturing CPT operation.

These options were evaluated based on clinical, financial, and operational criteria, and a business case was developed. After significant exploration, the team reached a unanimous decision: ROi would build and operate its own CPT manufacturing operation.

This make-versus-buy decision was based on six beliefs.

Self control. Mercy had to be in control of its own CPT destiny. The healthcare system believed it could not rely on traditional vendors to design and manage a CPT program that was fiscally equitable and responsible for both parties. Because of what Mercy leaders witnessed in Mercy hospitals through the Six Sigma study, the organization lacked confidence that anything short of self-management would yield long-term cost control.

Clinical alignment. Mercy believed it could align incentives with clinicians by self-manufacturing CPTs. A well-designed CPT program can yield significant operational efficiencies. Mercy believed it could develop a program that would best meet the health system’s needs, designed with the end users in mind, with the help of ROi.

In-sourcing experience. ROi had the resources and knowledge to in-source

CPT operations. When the decision to build and operate its own CPT manufacturing program was made, Mercy already had a strong operational infrastructure in place and had experience in-sourcing operations that are typically outsourced. For example, ROi already operated its own group purchasing organization (GPO) and had competent contracting resources in house, plus a centralized distribution facility and transportation network with all the associated IT systems required for operation. In addition, ROi had an internal performance consulting group, staffed by clinicians who had credibility with users and could manage the CPT conversion.

Leadership talent. ROi knew what it would take from an operational and regulatory standpoint to run a CPT manufacturing facility. The organization already had significant CPT talent, knowledge, and experience gained from working on the vendor side of the industry.

Transparent pricing model. A new pricing model would need to be developed that provided complete pricing transparency to the end-users, was activity-based, allowed end-users to easily model pack price changes based on CPT component changes, and eliminated the traditional margin management evils of the CPT industry. (ROi charges each separate hospital in the organization for the CPTs, adding up the cost of the components in the pack plus the cost for ROi to assemble the pack, sterilize it, and transfer it to the hospital. The end users see all of these costs at an item level, and thus can

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play “what-if” cost scenarios by moving products in and out of the pack.)

Senior leadership support: Working closely with Mercy’s senior leadership, ROi was able to gain widespread support for this initiative, providing confidence to proceed.

Vision Becomes Reality

In September 2008, ROi constructed a 6,000-square-foot CPT production facility at its distribution center in Springfield, Mo. Because it wanted to operate the facility based on world-class standards and one day be able to offer its CPTs to other like-minded providers, ROi applied for and received Food and Drug Administration (FDA) registration. This daunting task required a significant investment of time and resources to develop comprehensive standard operating procedures and policies that would meet or exceed the FDA’s stringent compliance standards. This process also included development of a sterilization cycle and validation process with a large commercial sterilization company used by many of the largest CPT manufacturers.

In addition, ROi’s GPO team had to contract with 150 vendors to cover the 900 unique items that were found in all its CPTs. To ensure that ROi would have price transparency with Mercy’s clinicians, ROi also developed an innovative activity-based pricing model that gives complete cost control to the end users and clearly aligns incentives.

After a year of planning, construction and implementation, the CPT facility began production in January 2009. To date, Mercy/ROi’s CPT self-manufacturing operation has far exceeded expectations. When the decision was made to internalize CPT manufacturing, Mercy was using 93 unique custom packs approximately 90,000 times per year.

By working closely with end users on pack construction and using an activity-based pricing model that provides price transparency and builds trust, ROi standardized some packs, eliminated unnecessary waste, and built new packs where none previously existed. As of August 2009, only three months after complete conversion from the external CPT vendor, ROi is now building 125 unique packs that are used 150,000 times per year, and the demand continues to grow daily.

Overall, Mercy has reduced its CPT costs by 20 percent; this does not include the efficiency benefits gained by the nursing staff in room set-up time. The growth of the pack program also speaks volumes about the strategic alignment that can exist between clinical end-users and a manufacturer, even though in this case the manufacturer happens to be internal.

A Word of Caution

Manufacturing CPTs is difficult and complex. Systems, regulatory requirements, production processes, pack design, staffing, and training all need to be carefully managed. To be successful, an organization needs a team that has full and comprehensive understanding of the CPT business, a niche industry where knowledgeable operational talent is scarce. Although ROi was successful in this endeavor, others interested in going down this path must tread carefully. What ROi does suggest—from the largest integrated delivery network to the smallest stand-alone hospital—is an immediate, in-depth analysis of the organization’s CPT program and much closer scrutiny of its design and cost. Without tight management, the use of CPTs becomes inefficient and expensive—a scenario most providers understand all too well. ☺

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