



## The Search for Supply Chain Excellence in Healthcare Awards

# Sisters of Mercy Health System

Chesterfield, Missouri

### Initiative

Please identify the ONE (each is equally weighted) primary innovation that your healthcare system is going to focus on in its submission:

	Logistics Management
	Contract Management
X	Strategic Sourcing
	Product Utilization

1. Describe the challenge or problem you were experiencing that motivated your system to make a change or improve collaboration and efficiency in the area(s) you chose. Who were the people, departments, suppliers, distributors or GPO’s involved in this process?

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 distributors. When properly designed and managed, a CPT program can lead to tremendous efficiencies in healthcare organizations.

Mercy’s 20 hospitals had been using CPTs for many years and each was managing its own pack program with no common methodology for effective CPT use. As a result, some hospitals had packs for every procedure, while others had virtually none. In addition, there was no structure for appropriate management of components within the packs resulting in widespread waste and pack underutilization. Caregivers were frustrated with unauthorized component substitutions and the length of time required to implement pack changes.

A Six Sigma project at one of Mercy’s Surgery Centers revealed an average of 6 items per CPT, at a cost of \$30.71, was discarded without use.

This dynamic led Sisters of Mercy to commission ROi, its supply chain division, to explore alternatives. ROi engaged Clinicians, Materials Management, Finance, Human Resources, GPO, Supply Chain, IT and the Chief Medical Officer to evaluate three options:

- Remain with current CPT vendor, but with more stringent management controls
- Convert to another CPT vendor.
- Build and operate a self-manufacturing CPT operation.

These options were evaluated based on clinical, financial, and operational criteria. After significant exploration, the team reached a unanimous decision: ROi would build and operate a CPT manufacturing operation for Mercy.

**2. What was the initiative you implemented? When did you start the implementation process? How did those involved impact the results you were looking for? Who was involved in the review process? (Name and position?) (Teams?)**

After a year of planning, construction and implementation in ROi's 6,000 square-foot CPT facility, pack production began in January 2009. Because ROi wanted to operate the facility to world-class standards, ROi applied for and received Food and Drug Administration (FDA) registration. This daunting task required a significant investment of time and resources to develop over 100 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.

ROi had to develop systems for CPT bill-of-material development and management, as well as integrate that system with Lawson, Mercy's ERP system. Mercy's IT division participated in the system design, construction, validation and implementation.

With the help of the Human Resource team, ROi recruited, trained and employed a team of CPT production and regulatory employees, dedicated to producing high quality CPTs.

ROi's GPO team had to contract with 100 vendors to cover the 700 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.

**3. Did you incur any challenges or difficulties at any point in the process? If so, what were they? How did you overcome above challenges?**

Several challenges occurred along the design and construction process worth mentioning.

The first challenge was the need to contract for non-sterile supplies. Historically, Mercy only contracted for sterile supplies, as most providers do. Because CPTs are designed primarily with non-sterile supplies,

ROi had to spend significant time educating manufacturers on Mercy's desire to internalize pack production and securing contracts.

The second challenge was to develop systems and logistics to ensure that non-sterile and sterile supplies do not get mixed in the warehouse and to ensure the non-sterile supplies could not be ordered by clinicians. A unique identifier system was developed for the non-sterile supplies to be used in manufacturing only. The supplies were physically segregated in the warehouse and were shut off from the typical MedSurg pick-path process and from being visible on the radio frequency scanning devices.

The most significant challenge was the development and validation of a sterilization process suitable for our products. This challenge was more difficult than anticipated due to stringent new FDA standards for EO/ECH gas residue limits and resistant bacteria found within some imported cotton products. This issue created the need for repeated testing during the cycle development phase to determine product sterility effectiveness. We adjusted several of the sterilization parameters to overcome these challenges and achieve compliance with FDA guidelines.

While these challenges were difficult, by establishing a trusting working relationships within Mercy's Clinical, Operational and Financial co-workers, ROi was given ample time to resolve these issues and implement the business plan.

#### **4. What have been the tangible results thus far, and what do you determine the results will be mid-term and long-term? How did you measure your results?**

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 November 2009, ROi is now building 175 unique packs that are used 200,000 times per year. Even with over 100% growth of CPT use across Mercy to date, demand for new packs continues to increase daily.

Overall, Mercy has reduced its CPT costs by 20%, not including the efficiency benefits gained by the nursing staff in room set-up time.

Long term, Mercy expects the CPT program to continue to grow and expand its kitting capabilities (ie. non-sterile kits, IV start kits, etc.). This program is a testament to the hard work and dedication of the ROi and Mercy teams and 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.