

Revamping In-House Clinical Engineering Services...in 90 Days

Jill Schlabig Williams

Subject: McLaren Healthcare Corp.

Location: Based in Flint, MI, McLaren serves 29 counties

Size: Eight regional hospitals

Staff: In-house corporate clinical engineering services staff totals 51

In 2002, McLaren clinical engineering services (MCES) was in the spotlight. An outside services company was working hard to convince senior management at McLaren Healthcare Corp. that the rapidly growing healthcare system should outsource its clinical engineering (CE) function. Intrigued but not convinced, McLaren hired an outside consultant to evaluate the in-house departments.

Senior management was looking to expand CE services. Coincidentally, the consultant was looking to reduce his travel time and work closer to home. In the end, they decided to join forces to revamp and strengthen the in-house department. The success of their joint endeavor has ultimately benefited the entire healthcare system.

Challenge

McLaren Healthcare Corp. has sustained a revenue growth rate of 20% annually for nearly 20 years and currently has more than 150 locations. In the midst of this rapid growth, there was little time to step back and take a fresh look at how the system could best manage the overall cost of ownership, implementation, and deployment of its medical equipment assets. By 2002, the time had come to comprehensively evaluate its CE services.

At the same time, Dave Dickey had built a successful consulting practice advising hospitals and healthcare systems on how to in-source CE programs that had previously been outsourced. When asked by McLaren's senior management to evaluate their in-house program, he proposed that instead of outsourcing, they expand the existing program and convert it to a corporate model.

"The vendor that was suggesting outsourcing the program made promises on cost savings but offered no



Dave Dickey came to McLaren as a certified healthcare consultant and joined the staff to help build an in-house corporate clinical engineering services department.

specifics beyond saving money by cutting staff," says Dickey. In contrast, Dickey proposed a step-by-step program to consolidate equipment budgets and databases, hire specialty staff, cancel or renegotiate vendor service contracts, and centralize call center activities.

Greg Lane, senior vice president and chief administrative officer, says that McLaren decided to go with Dickey's recommendations. "We took a thorough look to determine whether to outsource the department, evaluated the recommendations, and chose to in-source." The good news for Dickey was that they accepted his plan. The bad news? He had only 90 days to implement it.

Solution

MCES was organized as three functionally independent programs separated into three regions, using separate databases and accounting systems. There was no consolidated data and no centralized budgeting, but many outsourced specialty equipment service contracts.

Dickey's first step in revamping the program was to create a corporate-wide equipment budget, centralizing equipment maintenance budgets that had previously been spread among different departments. "We moved to a self-insured program, which was necessary to allow us to achieve savings in contracts, parts, and vendor repairs," says Dickey.

By combing through historical accounting data, he identified what equipment the three CE groups were currently maintaining and made decisions on what equipment the corporate group would handle, despite the current lack of staff. "There's an art and a lot of

guesswork in creating that first budget,” he says. The existing interdepartmental chargeback model of paying for equipment service was replaced by an annual financial cost-allocation model that distributes total support costs to all departments served.

The next step was to consolidate the three separate service management databases into one. He chose to stick with the system that McLaren Regional Medical Center was already using, and contracted with a vendor to migrate the other two databases over. A key goal was to be able to calculate a total cost of service ratio, which would allow them to measure how the program was performing over time. The cost of service ratio divides the total cost of all maintenance services (labor, parts, service contracts, overhead, vendor services) by the purchase cost of all equipment.

“In the beginning, the databases included purchase costs for only half of the equipment items,” he says. “The three in-house staff managers and I had to standardize nomenclature and estimate the values to fill in that data. Over time, as new equipment is purchased, actual acquisition cost is used.”

Next, he started cancelling service contracts. “That is where we achieved the bulk of the cost savings—getting rid of contracts and hiring people to do the work ourselves.” They moved to in-source equipment service for radiology, oncology, sterilization, ultrasound, and analytical laboratory areas.

In an initial audit, Dickey went to every hospital purchasing department, dug through file drawers, and reviewed every service contract to determine which could be cancelled early, which penalties were worth paying,

and which should not be cancelled because the risks or costs were too high. He also set a new policy that all service contract renewals must be managed by CE.

With departmental plans in place, Dickey next turned to staffing. He was offered and accepted the job of corporate director of clinical engineering and created several new service specialist positions along with call center staff positions.

“We had to pursue the specialty staff,” says Dickey. “We were initially able to hire a laboratory and sterilization specialist away from an original equipment manufacturer (OEM) and two x-ray technicians away from other hospitals.” Next up was a radiation oncology specialist, then more laboratory and imaging specialists.

All the specialists were corporate hires, who share their time at facilities as needed. Each facility also has dedicated BMETs. The management team and call center staff are on the corporate payroll, along with a full-time clinical engineer to handle incident investigations, device failure evaluations, clinical staff training, and new product evaluations.

“We worked closely with the hospital’s human resources department, as it was important to have them behind us 100%,” says Dickey. “We had to convince them that they couldn’t compare staff costs to other hospitals—they had to look at OEM pay scales. We needed comparable salaries and perks to lure specialists away.” Dickey convinced them of the value of the new staff by sharing the cost savings that could be achieved by bringing the specialty equipment service in-house.

Rolling out the revamped CE program went smoothly. Dickey met with the senior executives at each hospital

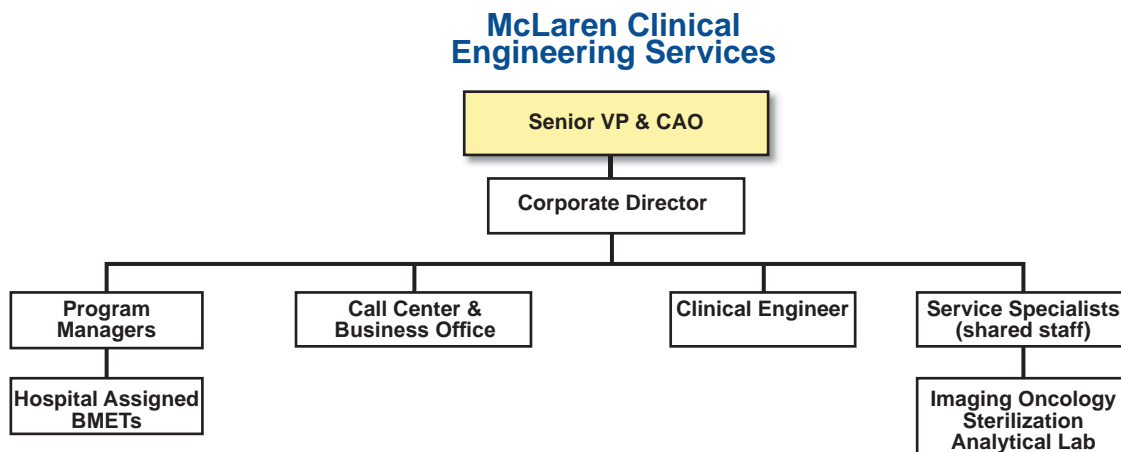


Figure 1. McLaren’s new staffing model included corporate clinical engineering management, degreed clinical engineers, biomedical technicians dedicated to each site, shared service equipment specialist staff to move between sites, and a central call center/business office to process all service requests and handle financial management of the program.

within the first few weeks, and went to each president one-on-one to ask for their support. To centralize budgeting, he had to convince the chief financial officers that they could allocate costs back to departments at the end of each fiscal year for reimbursement purposes. Along the way, Dickey and his team developed new policies and procedures. An MCES newsletter and e-mail broadcasts helped them communicate these new policies across the hospital.

Results

Dickey and his team rolled out the revamped CE services within the 90-day target, and have spent the time since then implementing and improving those original plans. The group's annual cost-of-service ratio, which started at 6.75% in 2002, was cut to 5.1% over the first three-year period, exceeding their goal of 5.41%. The group now maintains a "run rate" of 4.9%. Dickey estimates the total five-year cost savings at \$10.7 million.

How do the original in-house staff members feel about the transformation? "They are very happy, 100% behind it," says Dickey. "They all saw it as growth of the program, and were relieved not to be outsourced. For most hospital departments and administrators, transition to this new program was easily accomplished and accepted, due, in my opinion, to the hard work and dedication of the entire CE program staff. Without their support, development of this new program would have taken much longer to pull off."

"Things have gone quite well," agrees Lane, to whom CE now reports. "Considering the size and number of facilities in our healthcare system, the program works very well for us. Customers are satisfied with timeliness and response. Our cost-to-service ratio is excellent. Plus, our in-house department has the ability to bring new initiatives to the organization that couldn't have happened with an outsourced department, including clinical equipment improvements and key roles in major renovation and construction projects."

What about the transition from consultant to hospital system employee for Dickey? "I always knew that when the right opportunity came along, I could be lured back to an in-house position and scale back on the consulting. What I find interesting is that the most common problems and concerns in managing a CE program have not changed much, if at all, over the years. Issues related to staff productivity, cost effectiveness, project management, patient safety, work order documentation, inspection completion rates, regulatory compliance, and the need to do more with less... are all things I dealt with 30 years ago when I got my first CE management position, and I am still dealing with all these issues today!" All in all, though, you get the feeling that he's pretty happy to be right where he is. ■

Jill Schlabig Williams is AAMI's senior writer.