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Ambulatory Surgery Centers

A small ASC's automated supply chain

Two things are true about information technology: It is critical for organizations to succeed, or even survive, and it is expensive. For one small ambulatory surgery center (ASC) striving to meet financial and growth objectives, ingenuity proved to be the answer.

At The Center for Special Surgery at Texas Center for Athletes in San Antonio, one of 17 surgery centers managed by Regent Surgical Health, Painesville, Ohio, administrator Eric Day, materials manager Joel Medina, and corporate purchasing director Amy Gagliardi have established an automated supply chain that uses scanners, bar codes, and a well-organized database to track orders, deliveries, and payments for supplies.

They did this without a major investment in a materials management information system.

Using an off-the-shelf, web-based software package, Day arranged to have the facility's inventory list and purchasing records uploaded to a database by a third-party data entry firm, PurNet, Worthington, Minnesota. The information came back in the form of reports in the easily available spreadsheet program, Microsoft Excel.

"Once you have the ability to extract data, you have the ability to manipulate it," Day says. "This not only applies to what you can do from an inventory standpoint but just as well, from a financial, statistical, or even quality perspective."

While it took Day's ingenuity and computer savvy to work out the details, the new system is easy to learn and inexpensive to maintain. Regent's motivation was no different from that of many ASCs: the need to improve efficiency without a large up-front investment.

Day and Gagliardi discussed their method during the Ambulatory Surgery Center Association conference in San Antonio in May.

Old system was not working

The supply chain at Regent was typical of ASCs, and so were the problems, such as:

- Inventory was stored at multiple locations with no overall control.
- Product identifiers were assigned by vendors, so any product could have multiple IDs.
- Purchase orders were generated manually, a tedious task.
- Every vendor had its own system.
- Par level management and inventory replenishment were performed manually, and errors were common.
- Chargeable products had to be tracked and reported manually.
- Because the purchasing and financial systems were not integrated, data had to be entered twice.

Regent decided to look for a system that would solve at least some of those problems and developed specifications for one that would integrate purchasing, reporting, receiving, par management, inventory, and accounts payable.

Regent selected a system developed by Aliso Viejo, California-based Inventory Optimization Solutions (IOS) Corporation. IOS, which specializes in health care, makes its system available through several distributors, including Henry Schein and McKesson Medical. Regent, however, obtained the software through its agreement with PurNet.

IOS uses an application services provider (ASP) format to provide internet access to its software. The company's Enterprise Materials Manager system, which Regent selected, meets most of Regent's specifications. It works with handheld wireless scanners to enter inventory and patient use data. Users enter requisitions electronically, and these are automatically transmitted to vendors. Because the operation takes place online, it does not matter what kind of in-house system the vendor has. Finally, the system provides a 3-way match of invoices, purchase orders, and receipts before sending invoices electronically to accounts payable.

The cost to Regent is about $400 per month, with no initial investment, according to Day. "Inventory and labor savings pay for the system immediately," he says.

Gagliardi estimates Regent will save $700,000 annually using the system.

The labor savings begin with the ease of transferring data from the customer's system to the IOS database. Re-keying is thus not necessary.

According to a study at Lehigh University, conversion to this type of system can save an organization about 40% on both purchasing transaction costs and order fulfillment time, and reduce purchasing-related FTEs by about 7%.

Day notes that ASCs are now at a stage in automating the supply chain that many hospitals went through a few years ago, converting to electronic commerce and barcodes for inventory management.

Transparency and accuracy

With the electronic system, functions are displayed clearly on the screen and are easily traceable through the system.

For example, the surgery center orders 3 boxes of urinary leg bags, size 270 mL. The price per box is $100, so the estimated total cost is $300. The item number is 2009, and the vendor number is 21866-030.

The information appears in the Operations section under Purchase Orders. Later, accounts payable sees the transaction under Operations-Accounts Payable, with the same identifiers plus a general ledger code of 8000-300.

At both ends of the operation, unit and price totals provide statistical records. Records can be sorted by product, vendor, usage, and cost to identify potential savings or spot unusual patterns.

They also provide the building blocks of reports that offer flexibility to the ASC. They can be used to locate and track items, establish and modify par levels, maintain physician preference cards, and even document case costs by physician.

The key, Day says, is to generate reports that are compatible with Excel.

With an Excel spreadsheet in hand, Day is able to create barcodes and transfer them to a Microsoft Word file for printing as labels.

From the online IOS reports, he extracts the complete inventory into an Excel file that includes, at a minimum, an item number, product description, and cost expressed in unit price, regardless of whether the product is delivered by box or case. This makes case costing easier later on, Day explains.

The key Excel functions to know are:

- naming cell ranges within the spreadsheet
- using VLookup
- Mail Merge in Microsoft Word, using Excel's named range as data
- how to download the free barcode font (the name of the font is "Free 3 of 9 Extended").

"Once you understand these areas, it opens the door to developing tools only limited by your own needs," he says.

Serving a need

Steve Britt, managing director of sales at IOS, says about 750 surgery centers, nursing homes, and physician practices nationwide are using IOS software, mostly through their medical-surgical distributors.

During the past decade, he says, health care organizations have become aware of the need to manage supply costs, yet even some small hospitals are finding standard materials management information systems (MMIS) unaffordable.

"We decided to tackle the alternate care market," Britt says, "because none of the

traditional software suppliers targeted it." The key was to avoid a major capital investment and instead to charge a monthly subscription fee based on the services provided.

"Physician-owned organizations do not spend a lot for accounting or supply chain systems," he notes. "Surgery centers are in the same boat: They're not going to pay a lot for a supply chain system." He adds, "Is there a need for one? Very much so."

Other than computers, handheld scanners, and the cost of uploading basic setup data, there is no upfront investment to begin using IOS's 2 main packages, called Enterprise Materials Manager and Clinical Inventory Manager.

Britt says a typical cost is $500 to $1,000 per month, but he has sold entry-level packages for as little as $250 per month.

Multifacility companies like Regent receive additional discounts based on the number of facilities and users in the organization. Britt says return on investment can take as little as 3 or 4 months.

Much of that savings comes from the ability to track spending, especially with multi-facility operations, Britt says. Often different facilities are paying different prices. Having a central repository of purchase information highlights those differences: "If 1 ASC is paying differently, our system will catch it."

Faster, better, cheaper

Conversion to electronic supply processing affects every step from ordering to paying invoices. But it is on the patient care unit, where supplies are handled and patients are treated, that life becomes easier for staff and physicians.

Day explains: "With the barcode labels in place, we now have the opportunity to place orders via scanner, make large inventory counts more quickly, and create preference cards for case costing much more easily."

By scanning each item used during a procedure into a spreadsheet template, the ASC can track usage and cost by physician. The VLookup function is the driver of most of the case-costing template as well. It is able to look at the item number scanned, and then return, from the inventory extract table, the description of the item, the manufacturer, and the unit cost.

The user then only needs to enter the number of items used. Simple multiplication combines the "unit cost" and "number of units used" cells. Ultimately, the case costing sheet shows what products each surgeon has had pulled for a particular case as well as the price of each and the total spent.

As the manager's proficiency with the system grows, so do the possibilities, Day says. "Once you start working with Excel and barcoding, most likely you will start discovering new uses for them on a regular basis." ❖

—Paula DeJohn

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So you want to automate your supply chain

Issues an ASC should consider before deciding to automate, suggested by Steve Britt talks of Inventory Optimization Solutions (IOS):

- Has your facility expanded, so supply costs are increasing?
- What are your goals and ambitions regarding the supply chain?
- Is the OR manager too busy to spend time with materials management?
- Are you looking to standardize on fewer vendors? Or do you use few vendors, in which case you may not need to automate.
- Are your primary vendors helpful in setting up electronic data interchange (EDI) through their own systems?
- Do you have many facilities or just one or a few in a limited geographic area?

Britt notes that while ASCs of any size can benefit from automation, the average IOS client has 3 or 4 operating rooms. The main factor is how smoothly and economically the supply chain operates.

Britt cites a national study that found the average cost of processing a manual purchase order from sourcing through payment is $97, and 40% can be saved through automation.