

OR economics

Surgery, supply chain teams forge stronger link

Take the right people and add the right software and the right processes. The result: an end-to-end surgical supply and inventory management system built on trust that yields useful data for decision making.

In 2010, its first year, the team at the Mayo Clinic in Arizona achieved \$800,000 in savings out of a supply spend of \$35 million, or 3%. One example: a per-case savings of more than \$500 on many total hip and total knee cases.

With the urgent need for cost reduction nationally, a move is underway to bring expensive procedural areas like the OR into closer alignment with supply chain (sidebar, p 13).

“For years, we’ve heard about evidence-based decision making and data-driven models for the supply chain,” says Ryan Kirane, CMRP, director of supply chain operations for the Mayo Clinic in Arizona.

But actionable data didn’t come until they had the right software and people in place.

A key link is Donada Reimer, BSN, RN, a perioperative nurse who manages the surgical supply chain as clinical support services manager for surgical services.

Reimer combines her background as a former orthopedic team leader with 5 years of supply chain experience. She helped develop the value analysis process and headed implementation of the supply management software.

“With technology and standard processes, Donada has built a team that lets the clinicians get more time back in their day and not have to worry about supplies,” Kirane says.

Capturing supply use

The software, unique to the Mayo Clinic system, enables circulating nurses to capture supply usage during surgery. The system uses the information to manage inventory and accumulates data for later retrieval and analysis. Managers can get reports on supply usage at the surgeon, product, and procedural levels. They can also see how the organization’s supply costs compare with the reimbursement. The software, named the Supply Information Management System (SIMS), serves not only the OR but also other procedural areas including GI endoscopy, the cath lab, interventional radiology, and the electrophysiology lab.

How the system works

The software is based on the procedure cards, Reimer explains. When a procedure is scheduled, the system assigns that set of supplies to the patient and surgeon.

On the day of surgery, the circulating nurse opens the record and sees the list of supplies assigned to the case. The nurse reviews the list and the supply quantities and makes the appropriate changes.

If items not on the list are added to the case, the nurse scans the barcode or looks up the item in the item master and assigns the item to the case. At the end of the case, the nurse marks the case complete, which places it in audit mode.

Reimer’s team then audits the supply list to make sure it is complete and correct

Supply chain, OR integration gains

Full integration of supply chain with surgical services is still unusual. Only 15% of respondents in a recent survey said these functions were fully integrated. But more seem to be moving in that direction.

- In a 2010 survey, 68% said their supply chain function was partly or fully integrated with surgical services.
- That’s a gain over 2004, when 68% said they were independent or not fully integrated.

The results are from the Association for Healthcare Resource & Materials Management.



before sending it to billing.

"The billing interface runs every evening at 7 pm so we are billing our supplies within 24 hours," she says.

Meanwhile, behind the scenes, the software checks for items used on all the day's procedures and if needed, reorders them through Lawson, the purchasing system. Minimums and maximums are set in SIMS so the system knows when to reorder.

With SIMS, says Reimer, "we can keep a tighter control over our inventory because we know what we have on the shelf and what we use on a daily basis."

SIMS also accumulates a rich database that OR and supply chain teams can analyze for opportunities.

Managing costs for total joints

The data has helped in analyzing supply costs so Mayo can live within the Medicare payment for total hip and knee replacements. Supplies, including the implant, consume 22% to 43% of the DRG payment for these procedures.

By printing a report, the team was able to see how often supplies selected for these cases are opened but not used. They found one item—a cell salvage device costing more than \$500—was used often, but in many cases often not enough blood was retrieved to return to the patient.

They took the information to the orthopedic surgeons, who developed criteria for use of the device based on patient selection.

Now surgeons use the salvage device only when they are reasonably sure they are going to be able to reinfuse the patient's blood.

The data has also been useful in analyzing and comparing costs of implant systems. "We present the information to the surgeons. They make up their own minds, but having the information helps them make an educated decision," Reimer says.

Clinical focus

Reimer emphasizes the clinical focus of her supply chain group. "We wear scrubs because we go into surgery to work on supplies," she says. "Just having that presence and having clinical expertise and knowledge of the supply chain is what makes the program successful."

Success factors

Developing the surgical supply chain program took time and planning, she notes. To build the right team, as some employees left, she and her team thought carefully about who would replace them. "We hired based on what the need was, not just people who could do the job," she says. They looked not only for the ability to perform the physical duties but also for an understanding of business aspects of supply management.

Two other out-of-the-box ideas, notes Kirane, were providing the surgical supply chain team with a course in medical terminology and training in quality management methods.

Having a perioperative nurse heading the supply chain effort is a major asset, Kirane says.

"Donada and her team have helped establish a common vocabulary for the OR and supply chain groups. Before, they focused on the clinical aspects, and we focused on business and operations.

"Now there is a much better bridge between the two." ❖

—Pat Patterson

**Have a question
on the OR
revenue cycle?**

Keith Siddel will respond to questions in the column. Send your questions to editor@ormanager.com

You can also reach Siddel at ksiddel@hrmlc.com.