At 2 am on a cold morning last year, a group of OR leaders from Johns Hopkins stood in the FedEx logistics center in Memphis. They wanted to see what they could learn that could be applied to moving patients through the OR. Two of them also visited Wal-Mart’s distribution center in Bentonville, Arkansas.

Though these big companies move packages and boxes, not patients, the OR leaders wanted to observe how the companies manage their logistics.

“We were looking for world-class performers in logistics, which in addition to clinical care really is the core of what we’re doing,” says Robert Scheu, RN, MBA, senior director of perioperative services at Johns Hopkins Hospital in Baltimore, Maryland.

“Our focus is on the patient. We consider logistics to be a part of that. We believe efficiency has a direct bearing on our ability to deliver a high quality of care.”

Learning from FedEx, or Wal-Mart, and other industries, he says, “gets you out of the hospital context so you can think objectively about moving items through a system. How do they manage that? How do they reduce variability?”

“We’re not trying to depersonalize patients,” he stresses. “We’re trying to understand the best way to coordinate a complex activity. Because that’s what a nurse manager or charge nurse is doing.”

Johns Hopkins needs to plan its logistics carefully. The hospital currently has 48 ORs separated by almost 2 city blocks and is building 30 more.

“We need ways to help our charge nurses and coordinators manage in real time,” he adds. “They need to learn every day why today didn’t go as planned and how tomorrow can be better.”

A low tolerance for error

At FedEx’s superhub in Memphis, the group observed how the company moves 3.3 million packages a day for worldwide distribution. The hub has 300 miles of conveyor belts, 8,000 employees on days, 4,000 on nights, and parking spaces for 175 planes. Technologies like bar-code scanning are used to sort and route packages.

For Wal-Mart, too, the core competence is logistics.

“They know how to move stuff at a low cost,” says Scheu. “We want to try and do the same thing. If we think of the average hospital in this country, they run out of things all the time. Wal-Mart doesn’t.”

The Johns Hopkins team also visited the company that assembles its custom surgical packs.

One thing they saw both at Wal-Mart and the custom pack assembler—a low tolerance for error. “If you make 3 mistakes, you’re gone. There is no tolerance for mistakes,” says Scheu. In contrast, a hospital says, “It’s OK, try harder next time.”

These are some lessons learned that they took back to the hospital.

OR logistics

A big lesson from FedEx was observational awareness—supervisors are on the plant floor, constantly monitoring activities.

“Top to bottom, these people know what is happening,” says Scheu. “They know how their production line is functioning. They have their own air traffic control system so they know where their products are.”
Johns Hopkins leaders began discussing how they could transfer the lesson to the OR.

**Morning logistics meeting**

To increase their observational awareness, the OR’s key operational leaders now hold a short meeting each day at 6:45 am to review the status of cases.

“Our start time is 7:30 am, so we want 45 patients in the 45 ORs before 7:30. In 5 minutes, we go through 100 cases,” Scheu says. They check, for example: How many cases are scheduled that day? Have there been any sick calls? Are the rooms ready? Are there any known delays? For instance, laparoscopic equipment is missing from OR 1, or someone can’t find the laser for OR 2. For patient 78, the physician has been paged about the consent but has not called back yet.

“This allows us to intervene earlier rather than waiting until 8 am and saying, ‘The laser’s missing. We can’t start.’”

In the past few months since the meetings started and other steps were taken, the first-case on-time start rate has risen from about 40% to almost 70%. The goal is 80%, which Scheu thinks is realistic, given the hospital’s complex case load as a trauma facility and tertiary referral center.

**Leaders in scrubs**

Like supervisors on the floor at FedEx, OR leaders need to be present in the OR.

“I expect every level of leader who’s involved in managing the operating room to be in the operating room,” he says. “You can’t be in plain clothes all day at meetings. If you’re part of the management team, you need to be in the OR where the work is.”

Staff and charge nurses also need to be instructed when to take an issue to the supervisory level so it can be resolved quickly. For example, the postanesthesia care unit (PACU) is nearing capacity, and the charge nurse contacts a patient unit about transferring a patient. The unit clerk says the nurse is on lunch break and to call back in 20 minutes. At that point, says Scheu, the PACU charge nurse would call the manager to intervene, rather than waiting for the PACU to be full.

“We are talking about having the staff and managers grounded in operational concepts and well trained about when to escalate a situation,” he says.

**Share more data**

Like FedEx and Wal-Mart, Scheu thinks OR leaders need to make better use of data to make their decisions. For example, he and his team are being more rigorous about collecting and reporting data for first-case starts.

Time elements for patient stays in the OR are captured by the clinical documentation system, but for the rest of the perioperative process, times must be recorded manually. The data are then analyzed and reported not only by service but by individual surgeon and anesthesiologist.

The data on on-time starts is shared directly with each department chair both for the department as a whole and for individual faculty members so the chairs can see which faculty members may need special attention.

“Rather than saying to someone in passing, ‘Your cases have been starting late,’ we now can show them weekly data and say, ‘Your case started late yesterday, and here’s why. We need you to be here earlier tomorrow,’” says Scheu.

Data is also shared with nurse managers. For example, the nurse manager for orthopedics receives a weekly report showing the percent of cases not starting on time and individual physicians they may need to work with.

Another way to boost compliance has been to post start-time “honor rolls” of surgeons and anesthesiologists. In May, an “honorary list” was added for physicians who are approaching the honor roll, with on-time-start rates between 70% and 79%.

“Every month we’ve been doing this, the list of on-time people has grown,” Scheu notes.

**Supply chain logistics**

The FedEx and Wal-Mart visits also spawned ideas for improving the surgical supply chain.
Manage vendor performance

Companies selling to Wal-Mart must meet rigorous specifications, he notes. If a package is not the right size to fit on its trucks, Wal-Mart expects the vendor to change the packaging. If it’s too heavy, the company expects the vendor to make it lighter to lower the freight cost.

Hospitals tend not to do that. “We basically say, ‘Ship it to us whenever you want, charge us for overnight shipping, and we hope we’ll get it before the case,’” Scheu says. Instead, “we should be saying, ‘I need it before 7 am so I can put it on the shelf and plan to get it to the point of use.’”

After the visit to Bentonville, he started revising the standards for suppliers. The hospital’s supply chain managers are now working with the main distributor to manage the fill rate, and reports are now expected weekly rather than quarterly as in the past.

“We expect the fill rate to be 98%. We’ve said to the distributor, ‘You can’t just tell me it’s on manufacturer back order. That’s unacceptable. Our expectation is that you will keep enough inventory to mitigate back orders.’ The distributor is also expected to work with manufacturers to avoid backorders.

When the distributor delivers the order also is becoming more synchronized. When deliveries occur affects the department’s staffing and cycle counts, Scheu notes. If staffing is geared to a 6 am delivery, and the delivery arrives late or is drop shipped, “it affects our whole operations. Now we are saying that is not acceptable.

“If you can’t fill it, we expect you to drop ship it so we don’t have to wait a day. But we consider the drop-ship rate to be a reflection on the distributor’s performance. Even if they are paying for a drop shipment, it is still an interruption to us.”

Consider inventory level

In a surprising finding, Scheu says he learned Wal-Mart carries a little more inventory than probably would be expected because company officials said it costs more to run out of a product than to keep a little extra on the shelves.

“You never hear that at a hospital—it is always about shaving the inventory down,” he says. “This is a very different way to look at it.”

He figures that for about 80% of products on the item master, the hospital could double the amount of inventory and not increase the value of the inventory much because the items are relatively inexpensive and move quickly. Lower par levels might actually cost more because of additional shipping costs and the need for more employees to handle the inventory.

“I’ve actually gone to some financial meetings and said, ‘Here are my inventory numbers. I might decide to increase this item, and it might actually save us a few dollars.’”

Scheu acknowledges the support of hospital leaders in supporting the trips and the changes proposed since.

“These programs we’re doing throughout the hospital have been visible at the board level. That always makes things easier, but we’re pretty excited about what we’re seeing,” he says.

The project “actually has been a lot of fun,” he says. “I’ve been managing surgical supplies for many years. But I’ve never taken this type of approach. We have gotten far enough into this that we are really seeing the potential.”

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If you want to visit

FedEx tours

Tours of the FedEx Memphis hub are available to FedEx customers only. Tours are not available to the general public.

If you are a customer, to arrange a tour, contact your local FedEx sales rep. To find the name of your local rep, call FedEx customer service at 800/GoFedEx (800/463-3339).

—http://www.fedex.com/

Wal-Mart

To arrange a tour of Wal-Mart’s distribution center in Bentonville, Arkansas, for Johns Hopkins managers, Robert Scheu wrote a letter to Wal-Mart Stores president and CEO, H. Lee Scott, Jr, Wal-Mart Stores, Inc, Bentonville, AR 72716-8611. In the letter he explained that representatives from Johns Hopkins were interested in visiting to learn how they could improve their delivery of health care. Within a week or two, he received a call from the company inviting them to visit.

—http://walmartstores.com