What can a surgical services director learn about running the OR by working at a forklift factory? During 2 weeks in Japan in 2004, Sandra Saltzer, RN, MPA, had a chance to tour 3 factories and actually work in one. At the time, she was director of surgical services at Virginia Mason Hospital in Seattle, a leader in Lean thinking for health care. The hospital regularly takes managers to Japan to learn about the Lean management approach pioneered by Toyota.

Saltzer says she learned a lot, even though she doesn’t speak Japanese. “When you can’t ask people what they are doing, you have to observe the actual work process,” she says. That helped her see things differently when she got back.

“Because my background is perioperative, I think I know what OR people are doing. My experiences in Japan helped me to really understand work as it actually occurs, not as it is described in a policy or procedure.”

She’s also more aware as a consumer. At the airport, for instance, she has noticed that Alaska Airlines has 2 stations with one attendant for checking bags. As one passenger completes the check-in process, the attendant can immediately move to the next passenger, shortening the wait and dramatically decreasing the queue.

Saltzer, who is now the director of surgical services at the University of Washington (UW) in Seattle, is applying Lean concepts to improve the preoperative and discharge processes for surgical patients.

This is how Lean principles are being applied at UW.

Weeding out waste

A principle of Lean is to identify and eliminate waste from the work process. Saltzer says, “For me, this means asking, ‘What are we doing to inconvenience our patients?’ ‘What aspects of the process create opportunities for error?’ And, ‘How can we keep from wasting nurses’ time?’”

The preoperative project was a candidate for wasteology. At UW, surgery is performed in 2 buildings, the main hospital and the pavilion. Previously, all patients registered and received preoperative care in the pavilion. Those having surgery in the main hospital were transported to the main preop area where most of the process was repeated. Patients had to arrive earlier than necessary and wait longer for their surgery. It also consumed additional nursing hours and transport time.

Value-stream mapping

In Lean, value-stream mapping is one step toward eliminating waste. All of the steps in a process are identified, with an eye to eliminating every step that does not add value.
For the preop project, the team mapped and timed the process from arrival to the OR and realized how long the process was taking. The solution seemed obvious—have patients receive preop care in the location where they will have surgery. To make this change more manageable, the team decided to start not with the first patients of the day but with those having subsequent cases. Once the process was stabilized, they began including first patients of the day.

With this change, they identified 6 hours of nursing time that were no longer consumed. On-time starts also improved. The next step is to discharge patients from the same area where they have their procedures.

**Standardizing work**

Standardizing a process helps to prevent errors and reduce waste.

UW is standardizing work in the preanesthesia clinic by planning a standard format and sequence for electronic documentation and paperwork. Nurses will then have a consistent format to follow in their assessments, Saltzer notes, which may help reduce variability in the length of the preanesthesia appointments.

“We hope to reduce the wait time for patients and eliminate missing or incorrect information,” she says.

**Ask why 5 times**

A Lean method for better understanding a process is to ask “why” 5 times.

“When you ask, ‘Why do we do that?’ sometimes the first response is not the real answer. Asking ‘why’ 5 times helps get to the actual reason,” Saltzer says.

In one situation, she asked a charge nurse about the variability in the medical assistants’ arrival times. Some started at 8:30 am and others at 9 am, disrupting the flow of patients.

The first response to, “Why do we do that?” was a common one—“We’ve always done it that way.” Further questioning revealed that in the past, one medical assistant arrived later because of the city bus schedule. That schedule continued long after the medical assistant left. Understanding the real reason made changing the schedule easier.

**Creating a visual workplace**

In a visual workplace, staff and managers can see the status of a process at a glance. Producing a monthly report doesn’t achieve that objective.

The staff at UW wanted to be able to monitor the status of patients on the morning of surgery. The goal is to have patients arrive in the OR by 7:20 am. To monitor their status, the staff decided to post a laminated board in both preop areas.

“When a patient is ready to go to the OR, we put a dot on the chart next to the time,” she explains. “As the manager makes rounds, she can immediately see if patients are running on time or behind schedule.

“If they need more staff, we can deploy more staff. Or if they’re on time, we can congratulate them,” Saltzer says.

The board was also a help to the charge nurse, who had been requesting more staff. Saltzer explained that if he filled out the on-time chart, they could both have the information they needed to see what staffing was required.
“He began to see places where he needed to add staff in the moment, rather than adding a person for the whole morning,” she notes. The visual information helps managers and staff take ownership of a process.

**Sustaining the process**

Part of the Lean philosophy is to create a culture of steady, continuous improvement. How do you keep up the momentum? Saltzer, a certified Lean trainer, says the best way is to “make the change visible, keep checking on it, and keep reporting it.”

Changes in the preop process were made over 10 months.

“Each time we made a small adjustment, we needed to communicate the change, implement it, and then measure,” she says.

A lesson learned: “If leadership loses focus on the process, the process will drift back to what is more familiar. It requires vigilance to maintain the change and identify future improvements.”

For example, the postanesthesia care unit (PACU) has a target length of stay of 2 hours. But the staff doesn’t necessarily focus on that target as they care for each patient, and some patients stay longer than they need to.

One idea under discussion is to put a whiteboard by every PACU bed. When a patient is admitted to the unit, the nurse would write the expected discharge time. This visual cue helps all caregivers plan toward the targeted discharge time. It also assists the charge nurse to identify times when there may be obstacles to patient flow.

“I think the key to Lean is to engage the staff in the process and keep the information in front of them,” she says. “People want to do a good job. They want to improve the process for patients and themselves. If you communicate the reasons for change and the effects, they can be engaged and move the process forward.”

**Reference**

http://www.goldratt.com/