Quality improvement

Six practices of the lean operating room

Lean thinking provides a way to do more with less—less human effort, equipment, time, and space—while coming closer to providing customers with exactly what they want, according to James Womack and Daniel Jones, authors of the classic *Lean Thinking*.

Here’s a look at lean practices for the OR from consultant Jeff McAuliffe, MA.

**Eliminate waste**
Recognizing and eliminating waste are fundamentals of lean thinking.

It starts by asking, “Where does waste reside?”

“There actually is a small percentage of work that is value added,” McAuliffe notes. For example, the actual work of surgery starts with the incision. All around that are processes that may or may not add value.

One of the best ways to start identifying waste is direct observation. By taking time to actually observe a process, you can spot waste you might never have identified by brainstorming in a conference room.

*Example.* One orthopedic surgeon agreed to let a member of a lean project team observe him during his turnover activities. She followed him with a device that measures the distance he walked between cases. This surgeon liked a particular style of OR cap that wasn’t stocked near his OR. She discovered he had to walk across the whole surgical suite to get a cap, a round trip of about 1,000 feet. The simple fix: Stock the cap close to his OR.

**Install a visual workplace**
The idea is that your workspace is well organized so you see at a glance where each item is kept. You can tell instantly if something is missing. A visual workplace is safer and more productive.

The guide to a visual workplace is called 5S, derived from 5 Japanese words that describe good housekeeping:

1. Sort
2. Simplify
3. Sweep
4. Standardize
5. Sustain

*Example.* In observing OR turnover, the project team notices housekeepers have to walk a ways to get a mop. They decide to mount a mop on the wall between every 2 ORs. Behind the mop is painted the visual shape of a mop. That way, a housekeeper passing by can see at a glance if the mop is missing. A missing mop is an “abnormal condition,” prompting the housekeeper to replace the missing mop.

**Ensure quality at the source**
Lean organizations build quality into processes instead of relying on inspections to catch defects.

“When something isn’t working right, you don’t assume you need to add another inspection. Instead, you try to design a process where it is impossible to make an error,” McAuliffe says.
Employees are empowered to ensure quality. In lean manufacturing plants, any worker who spots a defect can pull a cord and stop the assembly line.

Example. In hospitals, gas connections have distinct couplers to make a misconnection all but impossible. Also, following the example of aviation, more health care organizations are empowering employees to speak up if they see an error starting to happen or observe a “near miss.”

**Redesign for steady flow**

Lean organizations design processes so activities have a steady flow without a lot of queuing and waits.

“The big bang is when you look at how many steps you have in a process and ask how much of that is rework or redundant,” McAuliffe says.

Example. An OR team redesigns its supply chain to ensure a steady flow of supplies. They arrange to have supplies delivered directly from the distributor to the sterile core to reduce locations where supplies are stored. That eliminates steps in the process and saves money, both in direct inventory and in labor to maintain it in multiple locations.

**Establish standard operations**

Standard operations are the effective choreography of people, information, supplies, and equipment into reliable processes that deliver better quality in a safer manner at less cost.

Example. Some physicians are skeptical about standardization of practice because they consider it “cookbook medicine.”

McAuliffe frames the discussion with them this way: “It is important to look at how activities can be standardized so providers don’t have to squander their professional judgment and discretion on just getting thorough the day. If your processes are controlled and standardized, then the only variation that gets presented to you is the patient. That’s where your professional judgment and discretion need to be applied.”

**Engage and respect everyone’s expertise**

Rapid process improvement (RPI) teams—a core activity of lean thinking—bring people together in a collaborative process focused on a larger goal. An RPI team in the OR involves everyone in the process, from surgeons to environmental services workers and transporters. It may be unrealistic to get physicians to participate in the typical week-long RPI workshop. Still, McAuliffe notes, “When we do bring them into a workshop, they begin to see themselves as part of a larger system that supports patients; in some respects, they are a ‘service partner’ in the hospital to support patients.”

Example. If physicians can’t attend a full workshop, they can still partner with the project team. They can be invited to attend for 1 hour when their input is most needed.

“I think there are ways to engage with physicians without asking them to spend hours of unbillable time,” McAuliffe says. ✤

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