Modern Healthcare

Finding efficiencies in the OR using tech

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The operating room is the backdrop for many of a hospital's highest-margin encounters. To make the most of time spent there, hospitals are turning to data and analytics.

Rochester (N.Y.) Regional Health in 2019 started analyzing how much time staffers spend in the OR, using a tool from Strata Decision Technology that links to the system's electronic health record system. The tool records when physicians, nurses and allied health professionals clock in and clock out of the OR, to help get a better sense of labor costs and better track cost variation between procedures.

Even if two procedures use the same equipment and supplies, one may cost more if there are more staffers assigned to it or if it runs longer, said Ryan McGinnis, the system's manager of decision support and cost accounting. He said Rochester Regional is still figuring out how to best apply its findings to inform improvements.

But down the line, McGinnis said it could help with business planning, ensuring the time staffers tend to spend on procedures aligns with what service lines are budgeting. Tracking year-over-year cost variation could also give service line leaders information on which surgeons generate more costs with their procedures and whether there are ways to standardize their processes and supplies.

For a possible use like that, it also would be important to tie in quality data and clinical outcomes, McGinnis said.

The tool puts cost variation under a microscope, "looking to see that we're saving where possible," he said. "If it's not, do we understand why?"

Given the high stakes in the OR, finding new efficiencies can save a lot. The OR is one of the most expensive areas in a hospital, said Michael Abrams, managing partner at healthcare consultancy Numerof & Associates.

A 2018 study found the average cost of OR time was $36 to $37 per minute, with $13 to $14 attributed to wages and benefits.

"Making the best use of it is critical," Abrams said, particularly today, as hospitals work to recoup losses amid the COVID-19 pandemic.

Figuring out how to keep the OR schedule full is one way to capitalize on that. That's why Dignity Health, which merged with Catholic Health Initiatives to create CommonSpirit Health in 2019, a few years ago deployed a tool from LeanTaaS to cut down on unused time in the OR.

Traditionally, a hospital allocates a specific day and time—known as a block—in the OR to a specific surgeon. If a surgeon doesn't schedule a patient, that time might go to waste.

The LeanTaaS tool hooks up to OR modules within the EHR and sends a reminder to the surgeon at least a week out if they haven't scheduled a procedure in their block— and asks whether they want to open it to others instead.

Since launching the tool in summer 2019, Dignity Health has generated more than $40 million by letting surgeons fill what previously would have been unused OR time, according to Brian Dawson, system vice president of perioperative services at CommonSpirit. Dawson is working on continuing to roll out the tool in Catholic Health Initiatives' footprint.

Meanwhile, Dr. Vasili Karas, an orthopedic surgeon at Midwest Orthopaedics at Rush in Chicago, has been using a system from ExplORer Surgical since 2018 to instruct nurses, techs and other staffers in the OR on the steps to expect during a procedure, based on his preferences, so they're on the same page.

A typical knee replacement might include more than 150 steps, from how to set up the room, how to position the patient and identifying which instruments to open and when, said Karas, who joined ExplORer Surgical's advisory board last week. The advisory role is unpaid but includes stock options.

A procedure's steps are displayed on a monitor in the OR. Some staffers also view early steps, before incision, on tablets so that tasks are tailored to their role.

The system proved particularly helpful when Karas joined Midwest Orthopaedics last year, easing the process to get the team familiar with his preferences and cutting down on delays if the OR wasn't set up as expected. The system also helped Karas pinpoint ways to streamline his procedures, such as by moving steps earlier or later in the operation so that he's only picking up a particular instrument once, rather than multiple times.