

CarolinaEast Increases OR Utilization/Volumes by Optimizing Existing Resources

In response to an increase in surgeon complaints, CarolinaEast Health System launched a comprehensive perioperative improvement effort. In less than a year, OR utilization increased by greater than 50 percent, and monthly OR volumes increased by about 75 cases—despite a lower cost structure.

Surgeon satisfaction is a key contributor to hospital financial performance. High surgeon satisfaction translates into high OR volumes, supporting strong financial results. Low satisfaction generally leads to declining case volumes. Given the importance of OR profitability, many hospitals are ready to spend whatever it takes to keep surgeons happy.

Yet money is rarely the solution to surgeon complaints. If anything, pouring money into the OR can reinforce organizational problems that are causing surgeon frustration in the first place.

The only effective way to secure physician satisfaction is to use the OR's existing assets to create a surgeon-centered environment. The key is to align leadership, time, and talent resources with the needs and priorities of the surgeon staff.

CarolinaEast Health System recently used this approach to raise surgeon satisfaction and increase OR caseload/utilization—without additional operating expenses or new capital investments. The health system focused on optimizing resources in three key areas: creating physician leadership structures, improving scheduling and efficiency, and optimizing the use of nursing talent.

Multiple Improvement Opportunities

CarolinaEast operates a 350-bed hospital and a network of outpatient clinics in and around New Bern, N.C. Its surgical services department consists of a

12-room main OR, which includes a cardiovascular surgery suite, and a six-room ambulatory surgery center (ASC).

For the past several years, surgeons have regularly expressed dissatisfaction over several issues: the difficulty of getting cases on the OR schedule, long turnover times between cases, and frequent case delays. Surgeons have also voiced frustration with the efficiency of OR processes.

Other problems affected the department during this period, as well. Utilization rates were low, and case volumes in both the main OR and the ASC had declined steadily for several years. Overall 2009 volume was approximately 15 percent below benchmark. In addition, the department's cost structure was high, with moderate overstaffing and \$2.7 million in inventory as of late 2009.

Low performance also impacted patients. Thanks to poorly designed perioperative processes, the overall patient experience was often disjointed.

In response to these and other issues, surgeon complaints began to pick up in 2009. Historically, the system responded to negative feedback from the surgical staff by opening more suites and allocating more FTEs—moves that did little to address the root causes of surgeon dissatisfaction.

Now, instead of just pulling out the checkbook, administration wanted to

tackle the underlying needs of the surgical staff. In early 2010, system leaders launched a perioperative improvement effort focused on optimizing resources in three key areas.

Leveraging Physician Leaders

The biggest problem at CarolinaEast was one it shared with almost all hospital ORs—a fundamental disconnect between the department's leaders and its surgeon "customers." Department management focused primarily on nursing issues. Surgeons were not involved with most decisions about how the OR was run. While many processes were managed well, some key issues to surgeons were overlooked. The hospital addressed this basic problem by creating leadership structures that formally involve physicians.

Physician-led oversight. The hospital began by creating a multidisciplinary Surgical Services Executive Committee (SSEC) to oversee the OR. The core of the SSEC consisted of six surgeons and an anesthesiologist. All were respected clinicians with a strong interest in OR improvement. The committee also included representatives from OR nursing management and hospital administration.

The purpose of the SSEC was to spearhead efforts to make the OR a surgeon-centered organization. Launched in January 2010, the committee focused immediately on improving schedule access and OR operations.

Daily physician management. The hospital also injected physician leadership into daily OR management by recruiting a surgeon and an anesthesiologist to serve as co-medical directors of the department. Working alongside nursing

managers, the two brought a physician perspective to day-to-day operations and decision making. More important, they took a leadership role in process development initiatives, working as peers with surgeons on efforts to improve scheduling, reduce supply costs, and streamline clinical pathways.

Optimizing Time Resources

As members of the SSEC looked deeper at OR processes, they began to understand that the organization was wasting its most important resource—time. Inefficiencies and structural problems were eating away at the number of productive hours available to surgeons. This not only frustrated the surgical staff, it suppressed OR profitability. The SSEC responded with a series of changes aimed at helping the OR get the most out of every minute.

Block schedule reform. The committee began by looking at the OR schedule. Both the main OR and the ASC used a traditional schedule composed of 4½-hour blocks. Blocks were assigned to surgeons based largely on seniority, and utilization requirements were only weakly enforced. In addition, unscheduled block time was released just days ahead of the case date. As a result, large stretches of OR time went unused.

Fixing the problem required restructuring the basic approach to scheduling:

- > First, the SSEC increased the basic block to an eight-hour unit, which enabled surgeons to more efficiently fill up block time; while surgeons can often squeeze only one case into a four-hour block, they can usually perform three cases in an eight-hour time slot.
- > Second, the committee created a block release schedule that gave managers greater opportunity to schedule unused time.
- > The SSEC also established a firm

threshold for block utilization: Going forward, surgeons would be required to maintain 65 percent utilization or lose their blocks.

- > At the same time, the SSEC reserved 20 percent of OR space as “open rooms” that could be used to accommodate surgeons’ last-minute cases.

After reforming the block schedule, the SSEC examined all the processes that fed OR utilization. They found several opportunities to optimize OR time by reworking process inputs.

Standardized scheduling process. One problem was that the OR had no standard process for scheduling a case. Most schedule requests were handled over the phone, which typically involved a lot of back and forth between schedulers and surgeon office staff. Even after multiple phone calls, case information was often incomplete.

To solve this problem, the SSEC created a fax-based scheduling process. Under the new process, surgeon offices are required to use a standard schedule request form. The form captures all the information that OR staff need to post the correct procedure and plan adequate resources. (Download CarolinaEast’s scheduling form at www.hfma.org/sfp, Summer 2011.)

Reengineered preadmission testing. Under the old system, the preadmission testing (PAT) process was a poorly coordinated series of evaluations, interviews, and tests that took patients all over the hospital. The entire process could take several hours, yet charts were often incomplete on the day of surgery. Poor patient preparation was a major factor in increasing case cancellations. The SSEC addressed the problem by using value stream mapping to redesign preadmission processes. (A Lean manufacturing

Web Exclusive

Download Related Tools

CarolinaEast has shared five tools developed as part of the health system’s perioperative improvement effort. Access these tools at www.hfma.org/sfp, Summer 2011 issue.

technique, value stream mapping is used to analyze the flow of materials and information and identify waste.)

In the new PAT Center, a nurse practitioner and other staff members use evidence-based practice guidelines to screen all scheduled patients. Based on the screen, certain patients are triaged for an in-person interview, exam, or testing. Process time and patient movement have been cut down significantly. The working goal of the PAT Center is to ensure patient paperwork and tests are completed three days before surgery. (Download three tools related to CarolinaEast’s reengineered PAT process at www.hfma.org/sfp, Summer 2011.)

Turnover process redesign. An examination of turnover procedures revealed that many tasks were performed serially. Reorganizing these tasks as parallel processes helped staff to reduce turnover times between cases. For example, under the new system, an orderly or nursing assistant transports the patient bed into the OR as the circulating nurse is completing the final count of instruments and supplies. (Download CarolinaEast’s OR Turnover Processes and Responsibilities Grid at www.hfma.org/sfp, Summer 2011.)

Supply management improvements. Project leaders also discovered that surgeon preference cards had not been updated in several years. Updating all preference cards saved OR time by ensuring that case carts were completely and accurately prepared for each procedure. (It also helped save supply costs by reducing

unused supply items.) In addition, staff members reorganized the layout of central sterile to eliminate common “zigzags” and allow nurses to pick supplies more quickly.

Proactive schedule management. To take schedule improvements a step further, the OR management team began holding a “huddle” every day at 1300 hours to review upcoming cases. The focus of this quick meeting is to identify and resolve problems that could lead to delays and schedule gaps—for example, instances where simultaneous cases would require the same piece of equipment.

Reallocating Talent Resources

Poor allocation of nursing resources exacerbated many of the inefficiencies in the OR. The department actually had extensive nursing talent, but problems with staff organization led to above-average costs and shortfalls in meeting surgeon expectations. The SSEC addressed these problems by making key changes to staff deployment.

Specialty teams. Traditionally, the department did not emphasize nursing

staff specialization, and there was inconsistency in matching skill sets to case requirements. After evaluating existing staff skills, OR management created nursing specialty teams for key services, including cardiac surgery, neurosurgery, obstetrics, orthopedic surgery, and vascular surgery. Nursing support for specialty procedures improved almost immediately. Management also established a group of nursing “generalists” who floated between specialties as needed. This helped smooth out staff scheduling and ensure full coverage.

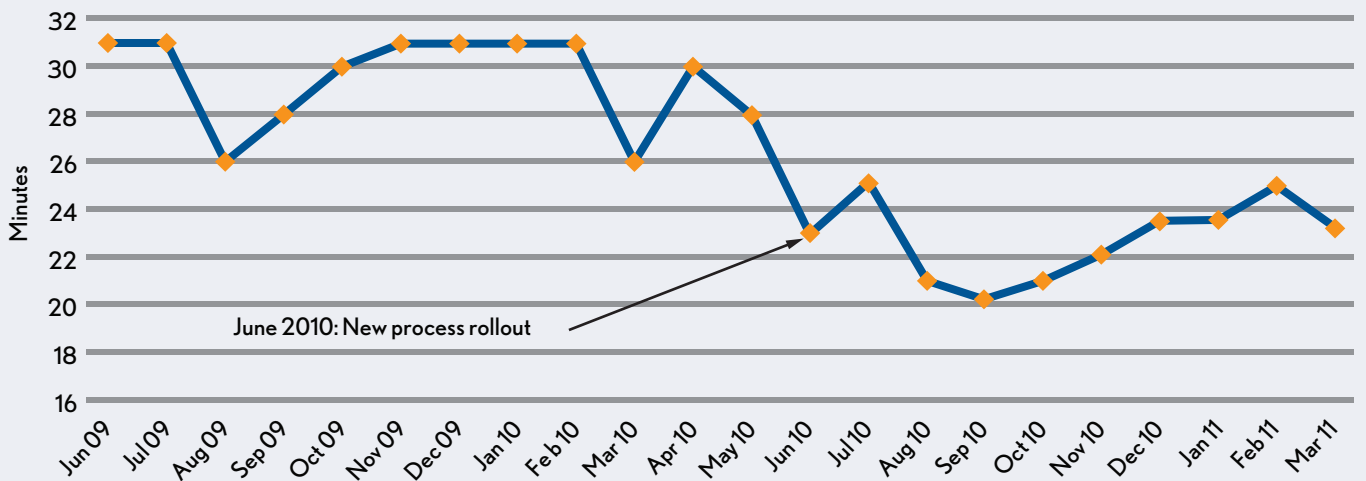
Cross-training. While nursing staff began moving toward specialization, management also took steps to break down nursing silos where they did not make sense. For example, there was a strict divide between the preoperative and the postanesthesia care unit nursing teams, even though they were very similar in function. Managers responded to this situation by cross-training the two units. They now function as one team with a common goal, which improves clinical care and allows more flexibility in scheduling.

Inefficiencies and structural problems were eating away at the number of productive hours available to surgeons. This not only frustrated the surgical staff, it suppressed OR profitability.

Staffing matrix optimization. Scheduling inefficiencies in the OR resulted in a lot of paid downtime for nurses. The introduction of the new, more predictable block schedule allowed management to allocate nursing hours more effectively. The leadership team adjusted nursing shift lengths and introduced flexible scheduling to staff up or down as needed to match case volume. In addition, management staggered shift start times, which eased the burden on the holding area first thing in the morning, resulting in better patient service and improved start times for surgeons.

Role redefinition. Several job description changes facilitated better performance. First, the role of OR charge nurse was redefined. Previously almost a clerical

OR Turnover Time Decreases



Source: CarolinaEast Health System

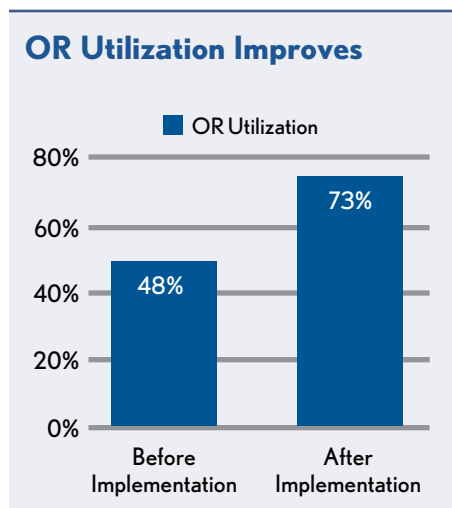
position, this role was expanded to include active management of the floor and support for OR staff. Reflecting the higher demands of the post, the position was split between two nurses who rotated weeks. Second, a member of the administrative staff was promoted to the newly created position of OR business manager. This move ensured more effective budgeting, supply chain management, financial analysis, and performance reporting.

Results

Perioperative improvement efforts at CarolinaEast began in January 2010. The new oversight structure was put in place first, and operational improvements were studied and developed throughout the spring. The entire package of process and organizational changes was rolled out in June 2010.

Progress was seen almost immediately in many areas, especially in OR efficiency metrics. Within less than a year, there was significant improvement in both performance data and anecdotal outcomes.

Better efficiency. Block schedule, preoperative process, and nursing staff improvements have produced major gains in efficiency.



- > On-time starts: By February 2011, the first-case on-time start rate had increased to 90 percent—from less than 50 percent before the improvement initiative.
- > Turnover time: In March 2011, average turnover was down to 23 minutes—from a typical 30 minutes or longer.

Increased access and patient satisfaction.

The improvements in OR efficiency have fueled overall enhancements in surgeon service.

- > Access: Because the OR is making better use of available time, the difficulty of scheduling cases has been minimized; surgeon complaints that they cannot access the schedule have all but ceased.
- > Nursing support: Specialty teams and other staffing improvements have improved clinical OR support; surgeons are now generally satisfied with the staff's clinical abilities and service.
- > Patient satisfaction: Surgery patients have noticed the improvement in PAT processes; case preps that would have taken three hours in the past are now handled in a fraction of the time—sometimes just 30 minutes.

Improved financial metrics. Overall operational gains have led to significant improvements in financial performance.

- > Nursing FTEs: The reallocation of nursing resources reduced the staff by 2.9 FTEs; overall, labor costs have been reduced by \$375,000, not including benefits.
- > Utilization: Average OR utilization during the six months following the rollout was 73 percent—up from the previous six-month average of 48 percent.
- > Case volume: As of early 2011, average monthly volume has increased to approximately 1,075 cases—from 1,000 cases in early 2010.

Some of the increase in case volume is due to the fact that the hospital began employing surgeons on a limited basis in 2010. Previously, however, the OR would not have been able to accommodate any additional volume driven by these employed practices. Efficiency improvements have enabled the OR to absorb this volume. In fact, the hospital was actually able to go from eight to seven open rooms, which means the department is accommodating more cases with a lower cost structure.

Voting with Their Feet

Measuring improvement in surgeon satisfaction can be difficult. When service and working conditions get better in the OR, you may not necessarily hear about it from physicians. The thing to keep in mind is that surgeons “vote with their feet.” When complaints drop significantly and case volumes increase, you know you have succeeded in raising surgeon satisfaction.

What the experience at CarolinaEast Health System shows is that there is not a single “big fix” that will resolve physician satisfaction issues. It requires a coordinated effort to streamline hundreds of processes, optimize structures, and align individual talents and abilities.

The good news for hospital finance leaders is that these improvements are largely a matter of making better use of existing resources. Hospitals can create a strong surgeon-centered environment in the OR without insupportable increases in spending. ☺

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