

# A Sense of Urgency in the Heartland

## How a Hospital Rapidly Smoothed Out Patient Flow and Spurred Cultural Change

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### VITAL STATISTICS

**The Facility:** Heartland Regional Medical Center. Its surgeons perform about 9,000 inpatient and outpatient cases a year in 10 operating rooms, two of which are reserved for cardiovascular cases. The majority of physicians and surgeons are employed by the hospital, but surgeons in some high-volume specialties, such as orthopedics, remain independent.

**Location:** St. Joseph, Mo.

**Beds:** 335

**Type:** Community hospital and Level II trauma center. Flagship facility of Heartland Health, a fully integrated health system consisting of the hospital, Heartland Clinic, Heartland Foundation and Community Health Solutions.

### OVERVIEW

In mid-2008, Heartland Regional Medical Center (HRMC) in St. Joseph, Mo., was like almost every other hospital in the United States in that it was plagued with patient flow problems, particularly in its surgical services. “In the operating room, our first cases were late, our turnover times too long and our surgeons were operating at 3:00 a.m. and 4:00 a.m. with elective cases. Neither our surgeons nor our patients were happy,” says Carolyn Paden, the hospital’s service leader for surgical and patient care services. Rather than continuing to struggle, the hospital began a project in August 2008 to solve the root causes of the backlogs.

Over the next year, the surgical oversight committee—a coalition of surgeons, anesthesiologists and hospital management—identified and tackled the key issues causing the flow problems.

“Our goals were to improve patient care, processes in the OR and work-life balance for our doctors,” Paden says. “We didn’t discuss potential savings in our meetings, but we have also achieved significant savings from this project.”

Not only was it successful in dramatically decreasing waiting times, delays and long hours in the OR, the process also helped forge a new hospital culture based on data-driven decision making, active collaboration between physicians and management and the development and enforcement of clear rules

of procedure. The flow problems facing Heartland are extremely common ones; however, the speed and effectiveness of its response were equally uncommon.

The success of the patient flow project was one reason Heartland Health won a Malcolm Baldrige National Quality Award in 2009. “We have worked very hard to continue to provide quality care to all of our patients, and Press Ganey has helped us reach our goals,” Paden says. “Most importantly, they helped us improve patient flow, which was an integral part of why we received this award.”

## **PART 1: SEPARATING THE FLOWS**

In August 2008, HRMC began working with Press Ganey to help smooth patient flow through the operating room. Before this project began, the hospital had revamped its surgical oversight committee, which would take the lead on this project. In the past, membership on the committee had been purely voluntary — resulting in spottily attended monthly meetings. The committee now consisted of appointed members representing all surgical specialties and anesthesia plus management staff from the OR, the post-anesthesia-care unit, the same-day-care unit and hospital leadership.

The committee met twice monthly on Tuesday mornings from 6:30 to 8:00 and was empowered to make and enforce decisions. Attendance at these meetings was excellent, encouraged by a strong surgeon champion, Steven Long, MD, and engaged members.

Prior to engaging Press Ganey, and as the first step in smoothing patient throughput, the hospital had designated one of its 10 ORs for add-on emergent and urgent surgical cases in order to eliminate the delays and bumped cases that occur when add-on cases compete with scheduled cases for OR space.

Having implemented the add-on room, the committee’s focus turned toward adjusting the surgical block schedule to reflect more accurately the actual utilization of OR time by surgeon and specialty and to provide more open time to accommodate new surgeons and growth in case loads.

However, as work began on adjusting the block schedule, it quickly became apparent that “we were not ready for phase II (smoothing),” Paden says. “We had an add-on room but were not using it appropriately. We thought we were doing it right but there were still lots of end-arounds occurring.”

Chief among those was surgeons going directly to upper-level managers to complain about any changes that were occurring and getting what they wanted. These actions “undercut the committee” and hindered progress, she says.

Paden met with the CEO and COO of HRMC and persuaded them to turn requests from individual surgeons back to the surgical oversight committee for resolution. This change was pivotal and allowed the committee to begin developing its credibility and make progress. Its first task then was to go back and clarify the use of the add-on rooms.

### **Urgency Classifications**

That process started with developing a well-defined system for classifying add-on cases by their clinical urgency, which could then be used to set priorities on the order in which the cases should be taken to the OR. The system was fair, predictable and based on the clinical needs of the patient, rather than being based on a first-come, first-served model.

The surgical oversight committee decided to use five main categories to classify its urgent and emergent cases. Time limits were set for each category, defining the maximum amount of time that should pass between the time a case was posted (i.e., the OR notified of the case) and when the patient was taken into the OR.

The add-on cases were defined as procedures involving non-life-threatening conditions in which delayed surgical intervention might lead to complications. They are designated by the scheduling surgeon with a time frame based on patient needs. The cases designated as an “A” are to be placed within 30 minutes; “B,” within two hours; “B1,” within one hour (C-sections); “C,” within four hours; “D,” within eight hours; and “E,” within 24 hours.

Once the categories were developed and accepted by the surgeons, they began to use them to specify the urgency of add-on cases as they posted their cases. The surgeon booking the case is responsible for categorizing the case, based on his/her knowledge of the clinical needs of the patient. For example, a surgeon can call an appendicitis case a “B” case if he thinks that the patient’s condition warrants surgery within two hours, even though appendicitis cases are often considered to be in the “C” category. At the time of booking, no one can question the surgeon on this decision since it is assumed that he/she is the one with the most accurate assessment of the patient. These classifications are reviewed retrospectively by the committee in order to keep surgeons from gaming the system.

Using the newly defined classification categories, OR staff collected accurate data on all add-on cases, including urgency class, booking time and patient-in-room time. After six weeks, the Press Ganey consultants ran the data through a queuing model to ensure that Heartland had set aside the right number of rooms to handle the add-on cases and meet waiting-time limits. In fact, the queuing analysis demonstrated the need for not one but two add-on rooms. After further research and discussion, the committee agreed to keep two ORs available as add-on rooms throughout the day, dropping to one room at night with an on-call team available.

### **Clear Rules**

Using the data, analyses and the urgency classification system it had developed, the oversight committee then clarified the rules for use of the add-on rooms. Up to this point, these rooms were not being used consistently and often held a mix of add-on and scheduled cases. This largely defeated the purpose of having the add-on rooms available, and utilization patterns had not changed significantly in the OR.

Once the committee had the support of the CEO and COO, it was able to develop and enforce clear rules without having to worry about individual surgeons being able to circumvent them. Anyone who had issues with the rules now had to bring those concerns back to the committee for resolution. After much hard work, the committee began to truly “own the process,” Paden says.

The importance of this phase of the OR smoothing project cannot be overstated. It helped to reduce the competition for OR space that existed as randomly arriving urgent/emergency cases clashed with scheduled cases, thus allowing for better flow through the OR. It also established the new role of the surgical oversight committee. Although the committee had always had “tons of data,” Paden says, it had not known how to use it effectively before.

The data on urgency classification, waiting times and the queuing analyses helped to give the committee a clearer picture and a better understanding of what was going on in the OR, she says. Committee discussions were “lively,” and “the members of the committee were engaged but initially hesitant about making changes,” says Kay Karasek, MD, HRMC’s chief of anesthesia.

Steven Long, MD, the committee chair, provided critical leadership, supporting the committee’s work and reporting its decisions at the Department of Surgery meetings. Each member of the oversight committee was also assigned to talk with another surgeon outside the committee, providing a direct link with the surgeon’s peers and developing support. Using data was very effective in these discussions, leading one surgeon to say to Karasek, “I guess I never looked at it that way before.”

## **PART II: ADJUSTING THE BLOCK SCHEDULE AND PROCESS IMPROVEMENTS**

Clarifying the processes around the use of the add-on rooms improved the quality of care delivered to HRMC patients by reducing the time they needed to wait for urgent/emergent surgery. It also helped to establish the surgical oversight committee as a credible group that was able to accomplish change. The group grew more comfortable working with data, sometimes requesting different kinds of data or data in a different format. Decisions were made based on the data, “not on emotion or anecdote,” Paden says.

Having established a process that worked for reaching consensus and having seen that these changes were having a positive impact on patient flow and quality of care in the OR, the committee next took on implementing key operational improvements to facilitate growth in surgical volume and improve efficiency in the overall process. In the summer of 2009, four workgroups were formed to focus on improving specific processes within the OR that had been identified as problem areas affecting flow: early morning starts, surgical supplies, OR turnover (i.e., cleaning) times and staffing/development of surgical specialty teams. These teams worked on a tight time schedule, with clearly defined tasks, responsibilities assigned to individuals and an expectation that they would develop a solution within two months. Each group met twice in July and twice in August, reporting their progress and recommendations to the Surgical Oversight Committee.

### **Adjusting the Surgical Block**

The committee used the same methods in adjusting the block that it had employed earlier in establishing add-on rooms. It started with data, looking at the total hours of surgery being done on elective cases by each surgeon.

Comparing this total to the current block schedule, the committee was able to identify surgeons who were consistently under-utilizing their blocks as well as those who clearly needed more block time. Surgical blocks had in the past been assigned based on surgeon preference and/or requests for time, and had not always accurately reflected the true needs for each surgeon or specialty. Now that the committee had data that gave it a clear picture of actual utilization, it was able to make adjustments to the block schedule, decreasing some blocks and increasing others. As part of this effort, case duration times were also analyzed and changes made so that scheduled case durations more closely matched actual case lengths, making scheduling much more accurate.

Next, the committee developed clear guidelines for the block schedule, establishing quarterly block review and adjustment, and setting a benchmark of an 80% utilization rate for maintaining blocks.

As before, complaints or requests came to the oversight committee for resolution. In order to facilitate its work, the committee began to “distribute data before the meetings so that we wouldn’t waste precious meeting time going over it,” Karasek says.

In addition, the committee developed a request sheet. Any physician who has a request or complaint for the committee must fill out the request sheet, explain the issues and present data to bolster the argument or provide additional information. The requesting surgeon meets with a “pre-meeting” committee that makes a recommendation on the issue to the oversight committee.

This decision is documented on the original request sheet with an implementation date and returned to the surgeon. Rather than having decisions and issues drag on, this system provides a closed loop, ensuring that decisions get made and implemented in a timely way, Paden says.

At this time, work is continuing in order to match staffing to the new block schedule and to develop both staffing flexibility and the specialty teams needed to provide optimum care. In addition, the committee understands that regular block revisions based on utilization must occur in order to optimize utilization and efficiency. This revision will help ensure that there is adequate time for elective volume and open time available to grow in addition to the add-on capacity for urgent/emergent volume.

### **‘Scrubs’ versus ‘Circulators’**

Adjusting the block schedule “didn’t immediately improve staff satisfaction,” Karasek says. “We had to adjust staffing to match the new block — this is a work in progress.”

The first step was to determine if the OR had the right number and mix of “scrub staff” — those nurses who work directly with the surgeon at the table — and “circulating staff,” nurses who cover the new block schedule. It is common to look at the mix of surgical techs and registered nurses rather than scrubs and circulators when adjusting staffing in the OR, but the real issue is the skill mix itself: how many staff members can scrub and how many can circulate, and what specialties they are trained to handle. The more RNs the OR has who can also scrub, the more flexible the workforce.

The HRMC staffing workgroup first had surgeons in each specialty review their top-volume cases and determine the number and type of staff they needed for their cases. The workgroup, with surgeon input, also developed a list of competency skills needed for surgical teams for each specialty. Based on that analysis, the group calculated the total numbers and types of staff (scrubs vs. circulators) that were needed to cover the OR 24/7. Staff members assigned to the add-on rooms have general surgery skills or orthopedic skills, because the majority of add-on cases fall into one of those two categories.

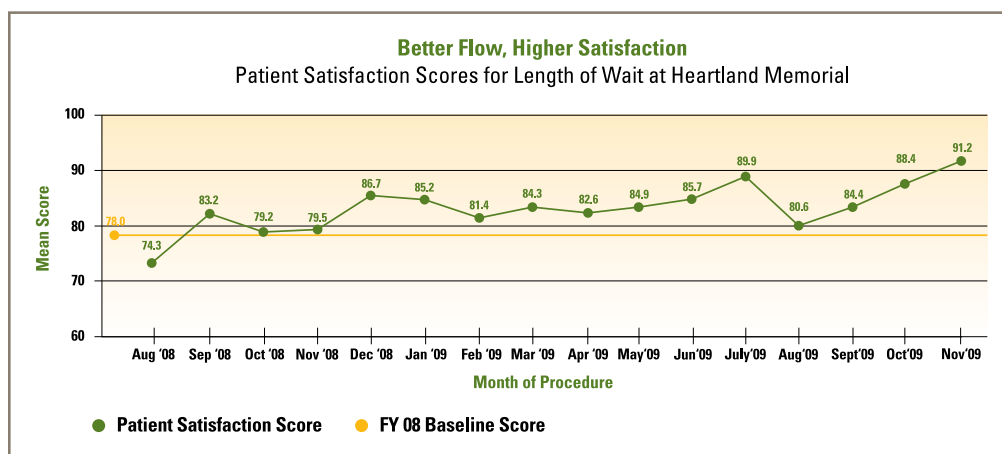
The next step was to compare that list of staffing needs to the current staff mix to determine what specialties may be over-staffed and what specialties were under-staffed. The mismatch had been leading to excess overtime for some teams and low work-loading for others, a frustrating situation in both cases. Using the workgroup’s analysis as its guide, the OR is training staff—a number of RNs are training to become scrubs, and other staff are increasing their competencies in particular specialties—in order to staff the blocks with the right staff with the right mix of skills and expertise.

### Improving Early Starts

“Some people snickered at first. They didn’t expect that we would be able to make any real changes,” says Connie Stanton, team leader of Heartland Memorial’s post-anesthesia-care and same-day-care units and a leader for the workgroup assigned to improve each day’s opening surgery starts. For this work group, data served primarily as a monitoring tool. By the end of the project, Stanton was reviewing data on first starts every afternoon, identifying problems and communicating with her team. “I look at the process every day, where we are, and send e-mails to the staff, including some of the reasons we were late.”

Perhaps the success of this project is best expressed in a story told by Stanton about a vendor who says to her, “Most hospitals don’t start on time but we know now that we’d better get to Heartland on time or we’ll be delaying you.”

Identifying all the steps involved in getting a case started on time, agreeing on definitions and responsibilities and staggering nursing shifts to better handle the morning crunch have all helped to smooth the start of the day. But success was bolstered by the support of Long, who sat in on some of the workgroup meetings, by the involvement of Karasek in the workgroup and by developing clear guidelines for the process as well as penalties for non-compliance. These guidelines were amended and then implemented by the surgical oversight committee. In addition, Stanton feels that as the hospital fine-tuned its operations, the surgeons began to get involved and to involve their office staff in making sure they got to the OR on time.



### Measures of Success

Within a year of starting the patient flow improvement project, Heartland Regional Medical Center had reduced overtime and call time for its OR, post-anesthesia-care and same-day-care staffs, and the number of minutes that the OR was busy with elective cases after 5:30 p.m. had dropped by almost half. Elective cases are rarely scheduled to continue after 5:30, in stark contrast to the days when surgeons were forced to do some of their cases in the middle of the night. Compliance with waiting time limits for add-on cases improved from 80% to 92%. These results are also reflected in improvement in patient satisfaction scores on the question of waiting times, which have risen significantly since the project began (see chart).

In a little more than a year, the physicians, staff and management at Heartland Regional Medical Center achieved an impressive record of tackling and solving many of the key problems affecting patient flow in the OR. An even more important result was that the project stimulated and was sustained by a huge cultural change at HRMC.

“Surgeons want to operate — it was in their interest to get involved and have a voice in the changes,” Karasek says. “It’s important to have surgeons who are willing to entertain the idea of change and who are willing to get involved. Everyone knew there needed to be change, and that they would rather be part of the solution if possible.”

Through this project, the surgical oversight committee evolved from a group that met once a month with spotty attendance to an engaged set of surgeons, anesthesiologists and top hospital managers who met twice a month to make and enforce important OR management decisions. Their decisions were based on data and consistent rules rather than on anecdote.

Individual surgeons could no longer do ‘end-arounds’ to administrators, but had to present their requests to their peers on the surgical oversight committee.

Top management supported the actions of the committee, and the committee focused on making and enforcing decisions that were in the best interest of all patients, physicians and the hospital.

The process was not always easy, the work was intense and meetings and discussions were often “lively.” But the results are clear, and the culture that has developed will enable Heartland Regional Medical Center to continue to respond to new challenges in the future in a manner that is both collaborative and innovative.