Preparing patients for surgery at Cullman Regional Medical Center in Cullman, Alabama, used to take about 200 phone calls a day. Here’s a typical scenario:

The OR is ready for the next patient. The OR calls the same-day surgery unit and asks if the patient is ready. Same-day surgery says the patient hasn’t arrived. Both departments call registration to see if the patient is there yet. They’re told the patient hasn’t arrived. The OR keeps calling to check. When the patient arrives, registration calls the OR to let them know and calls same-day surgery to pick up the patient. The OR immediately calls same-day surgery to see if the anesthesiologist can see the patient. Same-day surgery says it still needs a few minutes to prepare the patient. A short time later, same-day surgery calls the OR looking for the anesthesiologist, who has to be located. After the anesthesiologist sees the patient, same-day surgery calls the OR and says the patient is to have spinal anesthesia. The OR calls the holding area to tell the staff to set up for a spinal.

Today, most of those phone calls have gone away, thanks to an electronic patient tracking system developed in house.

The hospital’s IT department did the programming for the 5-department system, which cost just under $10,000, including 5 LG flat screens and Apple Mac minis to run them. The tracking system, which received a Hospital & Health Networks Most Wired Innovator Award for 2012, stands alone and is not tied to Cullman’s electronic medical record.

Lean idea

The idea for the tracking system sprang from a Lean Six Sigma course. One final assignment was to identify a project to implement.

For this assignment, Dewight Davis, RN, CNOR, executive director of surgical services; Shelia Barksdale, RN, the OR supervisor; and 2 IT professionals, Debby Mason and Amel Drake, happened to be at the same table.

As Davis and Barksdale shared their idea for the tracking system, the hospital’s CEO, Jim Weidner, stopped at their table. He liked the idea and gave his full support for the project. Work on the system started in November 2009, and the system went live in January 2010.

Though many tracking systems are on the market, there weren’t many at that time, and “certainly not for the price we were able to complete this project for,” Davis says.

Calls cut in half

“Like most ORs, we were inundated with communication by telephone,” says Davis. Cullman has 9 ORs including 1 cysto/urology room.

The tracking system, which consists of 5 electronic whiteboards, has cut the calls in half.

The electronic whiteboards are located in registration, same-day surgery, the OR, the postanesthesia care unit (PACU), and the family waiting area. The whiteboard in same-day surgery has a touch-screen overlay, which is where the data manipulation occurs.
The electronic whiteboards in the patient care areas show when a patient has signed into registration, alerting same-day surgery staff to go after the patient. They also have the patient’s expected arrival time in the preop holding area so anesthesia providers and OR teams can plan accordingly.

Once the anesthesiologist sees the patient, the whiteboard is updated with the type of anesthesia to be administered so the staff in the preop holding area can start setting up for a spinal or epidural if needed.

“The patient’s location is now posted on the whiteboards for all the teams to see,” says Davis. “The phone calls now are more clinical rather than a barrage of questions about the patient’s location.”

**Keeping families informed**

When a patient arrives in registration, the patient’s family is presented with a personal identification number (PIN), a variation of the medical record number. Once the patient is moved to the OR, the tracking board in the family waiting area shows the PIN.

The family can track the PIN as it moves across 4 columns: In OR, Surgery Started,
In Recovery, Out of Recovery (illustration).

Before the whiteboard was installed in the waiting area, families watched television.

Now, Davis says they gaze at the whiteboard and wait for their family member’s number to move to the next column.

The right side of the board has an area for advertisements and announcements, such as wellness information. Some physicians have inquired about posting ad spots, which the hospital is considering.

**Future applications**

Future uses for the tracking system are to collect data for benchmarking and for analyzing patients’ times from admission to the anesthesia assessment to entry into the OR.

“This can help us determine if we are having patients admitted too early, which is a huge dissatisfier,” says Davis.

Though the OR has always been able to track times using the nursing documentation system, other numbers have not been available, such as time from registration to admission to same-day surgery and time from admission to anesthesia assessment.

“We’re able to track efficiencies now that we didn’t have a good tracking methodology for in the past,” says Davis.

Presently, the IT department compiles the information from the tracking system and produces reports using an Access database. A software upgrade is being considered to make reporting easier.

“It was truly exciting to be on the team developing this system,” says Davis. “More than one morning, the IT team came to work with bags under their eyes from working most of the night on the program,” he says. “But no one ever complained. Instead, they said, ‘See what you think.’ It was our baby we were developing.”

—Judith M. Mathias, MA, RN

**Reference**