Gathering data and assembling it into easy-to-read graphs helped one ambulatory surgery center (ASC) improve its record for on-time starts.

Staff nurses suggested the project to help identify why their hours were regularly being extended at the end of the day. They suspected the reason cases were not starting on time was that some of the surgeons were late.

If behavior was going to improve, the ASC’s quality improvement manager knew they needed solid evidence on the reasons for the delays. She organized a team and developed a QI study.

“We wanted to know if it was because the physicians were late, anesthesia providers were late, or the process was delayed—patients were late, equipment wasn’t in the room, and so on,” says Jayne Van Valkenburgh, RN, PhD, CPAN, QI manager for the Everett Clinic ASCs. The Clinic, based in Everett, Wash, is a multispecialty group practice with more than 200 physicians and 2 ASCs. The study was conducted in 1 ASC during 1999 and 2000. The ASC did not have a computerized information system at that time.

Defining a late start
The first thing the QI team did was to define “late start” and get buy-in on the definition, including from the physicians.

The team decided a case would be considered late if the patient arrived in the room 5 minutes or more past the scheduled start time. Physicians would be considered late if they were not in the facility and ready for surgery within 5 minutes of the scheduled case time.

To prepare for data gathering, the team discussed which questions they most wanted to answer to provide evidence that would help change behavior. The questions they identified were:

- Why were cases starting late?
- Were the surgeons the main reason for late starts?
- Was it a few surgeons who were late, or was it across the board?

“If the problem was not the physicians, we wanted to let the nurses know so their perceptions would change,” Van Valkenburgh says.

To find the answers, they decided to gather data on the time surgeons arrived in the facility and were ready for surgery (recorded by the OR charge nurse) and the time the patient was in the room (recorded in the OR record). If the surgeon was late, the charge nurse recorded the number of minutes late and tried to determine the reason. If the patient was in the room late due to other factors, the charge nurse recorded that information.

Causes documented
For each late case, the cause was documented:

- physician late
- previous case ran over
- anesthesia provider late
- process issue (e.g., patient late, waiting for an electrocardiogram, equipment not available).

They decided to collect data for the first case of each physician’s block.
We didn’t think it was fair to study only first cases of the day. We also wanted to capture data on the later blocks,” VanValkenburgh says. Baseline data was gathered during the third quarter of 1999 and the first 3 quarters of 2000.

**Reports to surgeons**

At the end of each quarter, Van-Valkenburgh aggregated the data, entered it in an Excel spreadsheet, and used it to create 2 graphs (illustrations, p 26):

- a pie chart showing the percentage of late starts attributed to each of the 4 causes
- a bar chart showing the number of late minutes per physician for that quarter and the previous quarter.

Each surgeon received a report with the bar chart; his bar was identified by name, but the others were identified only by department (Ortho 1, Ortho 2, etc). “We decided to use the number of minutes surgeons were late rather than the percentage of cases that were late so we could better show the impact of the lateness,” she says. For instance, if one surgeon was late by 6 minutes for 3 times in 10 starts, he or she would be on time 70% of the time, with little impact on the schedule. But if a surgeon was late by 60 minutes 3 times in 10 starts, he or she would be on time 70% of the time, but the impact of the lateness would be much greater.

**Competitive instincts**

In all, 60% of the delayed minutes were because of a late surgeon. Two orthopedic surgeons were late the most often. Seeing the graphs helped bring out the surgeons’ competitive instincts, VanValkenburgh notes. “Once we gave them the charts, they really did improve on their late minutes,” she says. The total number of late minutes, which was over 2,000 in the first quarter of the study, fell by 35% to 1,300 minutes in the third quarter of the study.
The tardiest surgeons also improved—one by more than 60% and the other by more than 40%.

“The most important thing is to have valid data in a form that is easy to see and understand,” VanValkenburgh says. “Physicians are data driven, but they need to have the data in a format they can relate to. You also need a way of measuring your progress.”

The data gathering and reporting were time consuming, she acknowledges. It is easier with a computerized information system because fields can be devised to capture the desired data, and it can be more easily retrieved. But it still takes a person to create and distribute the reports and drive the change effort.

Despite the time it took, the project “was well worth it,” she says. “We are not hearing as many complaints from the staff because they know we looked into the problem, and something changed as a result.”

Once a QI project like this is successful, it’s easier to get the staff’s buy-in on future projects because they see that change will happen, VanValkenburgh comments.