A data-driven project dramatically improved on-time starts in our operating rooms at St Boniface General Hospital, a 507-bed academic tertiary care facility in Winnipeg, Manitoba, Canada. The previous year’s performance had averaged 75%. The goal was set to achieve a 90% rate.

The operating room management, along with a variety of key pre-procedure departments, developed the following strategies for achieving this goal.

The admitting department
Statistics were collected for 4 weeks to evaluate current practice.
• Statistics were reviewed to capture average registration times.
• The priority for registration was changed. Registration clerks are instructed to register patients scheduled for 7:45 am first cases of the day before other patients. Patients having cardiac procedures are also prioritized because additional preparation time is required.

The following areas were identified for improvement:
• New computer software was implemented to allow for more preregistration.
• Registration clerks’ hours were readjusted to maximize efficiency during busy early hours.
• The process was changed to ensure clerks were processing OR patients on a priority basis rather than a first-come, first-served basis.
• Additional registration help was enlisted from the emergency department prior to opening of the admitting department at 6:15 am.

Day surgery/inpatient units
• Time data was collected to capture transportation time from the admitting department. Average admission time on the unit included the patient changing into a hospital gown, recording vital signs, collecting lab work, administering medications, and completing the consent process.
• To address delays in blood collection, a requisition flag/stamp was developed to signal these samples as a priority. The lab would be alerted to fast-track these specimens with a direct callback of results to the OR.
• Arrangements were made through the preanesthesia clinic to have some patients come in for their blood work the afternoon before their surgery date.
• A point-of-care rapid International Normalized Ratio (INR) meter was evaluated to reduce the wait time for results by 1 hour.

The operating room department
The data collection tool for the OR was designed to capture a variety of elements over a 4-week evaluation period:
• patient’s arrival time in the preop holding unit
• surgeon’s arrival time
• anesthetist’s arrival time
• time to OR theater [operating suite].
A unit clerk was situated in the area to record all of these times. Once the data was reviewed, clear trends started to emerge (pie chart).
OR remedies

These were steps we took to help reduce OR delays. To increase awareness of our goals:

• Memos were sent to the department of anesthesiology and department of surgery and to all surgeons and anesthetists on staff by the OR management group.
• Announcements were made to the OR staff at the weekly in-service session.
• A memo was sent to all surgical wards and the emergency department.

The memos outlined the expectations with regard to arrival times in the OR. Surgeons were advised either to arrive in the OR by 7:30 am or to notify the preop holding staff that they were in the hospital. If there were outstanding patient preparation issues, such as the surgical consent or patient queries, they could be addressed at this time, preventing any potential delay. The surgeons were informed that if the consent process had not been completed, their patients would not be transported to the OR.

Staffing remedies

Steps were taken to address staffing:

• Two additional nurses were assigned to the preop holding unit in the early morning from 7 am to 7:30 am. These nurses would admit the patient that they would care for in the OR. This practice provided for continuity of care and helped to decrease patients’ anxiety levels.
• A clinical resource nurse position was established to coordinate the many facets of patient care during the immediate preoperative phase. This role allowed for follow-up of deficiencies and consistent tracking of performance, which contributed to an increase in on-time starts.
• Hours for OR health care aides (HCAs) were adjusted, with 3 to start at 6:50 am. This adjustment enabled the transportation process to flow smoothly.
• New hair clippers were evaluated and purchased to further expedite hair removal. That enabled patients to have hair clipped as close to surgery as possible, reducing the risk of surgical site infection.
• A ward clerk was assigned to assist in the preop holding unit from 7 am to 8 am. The clerk’s primary function in addition to data collection was retrieving lab
results, resolving blood typing issues, and paging surgeons and anesthesia providers.

- To provide additional transportation assistance, we enlisted the help of our early-start instrument attendants to assist in moving patients to the OR.

**Improvement techniques**

To promote improvement overall, we relied on the following techniques:

- Gentle transition to improve efficiencies. Though a marked improvement was expected following implementation of our strategies, gradual progress was demonstrated, given the multidisciplinary compliance required.
- Continued measurement of progress and data collection throughout the process. If you stop measuring progress, you will stop improving your efficiency.

**Results**

With the remedies in place and the goal set, we started to see results. The months of strategic planning with all of the team, including the peripheral departments, yielded favorable results (line chart).

When the following month’s statistics were reviewed, the on-time starts had catapulted to 90%. Our goal had been reached. Subsequent months revealed even higher than expected results of 93% to 95%.

These favorable statistics were shared with all staff. A scorecard was developed and posted, highlighting the successful increase in on-time starts. On occasion, if we saw a dip in performance, the data would be reviewed, and areas of concern would be targeted for improvement. Continuous evaluation of performance was necessary to achieve the results we desired.

Communication with all team members is crucial to successful operating room on-time starts. Continued follow-up with the surgical wards regarding efficiencies and reasons contributing to delays was carried out.

Late arrival trends continued for a small group of OR team members, which were dealt with by the OR management group.

The sharing of statistical data with all staff continues to be useful to keep awareness levels high. The progress demonstrated in the chart and graph was positive reinforcement for staff of our successful achievement.

**Conclusion**

The bar was set high. We wanted to improve our on-time starts significantly to a level of 90% or greater. The challenge was embraced, and the team set about to meet its objective. The goal was reached and continues to be maintained. This achievement was only realized through the creation of a true team environment.

—Diane L. Marion, RN
Clinical Resource Nurse,
Operating Room
St. Boniface General Hospital
Winnipeg, Manitoba, Canada