First Case On Time Starts at a University Academic Center – Lessons Learned

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BACKGROUND

Many hospital operating rooms (ORs) struggle with the percentage of successful first case on time starts (FCOTS). Delays in FCOTS can lead to an increase in hospital costs and further downstream delays in subsequent cases, which can negatively impact a patient's overall experience. With over 315 surgeons at SBUH, just under 13,000 surgeries were conducted in the main ORs in 2020. Before the coronavirus era, SBUH performed 14,5000 surgery cases annually in 22 main ORs. Of those surgery total numbers in 2020, 5,000 of them were firsts-cases, with a 38% FCOTS for the January 2020-February 2021 year.

PURPOSE

Objective: We sought to conduct a quality improvement project that identified barriers to FCOTS by using direct observation, data collection from Crystal Reports and Surgical Compass and daily huddle meetings of the OR throughput committee. From there, interventions could be delineated and implemented to increase FCOTS.

METHODS

The OR throughput committee was composed of the nursing director, nurse OR manager, chief nurse anesthetist, OR turnover coordinator, nurse manager for pre-operative services, two nurse clinicians, an anesthesiologist, a surgeon, and a quality management practitioner. The committee collected daily data reports from Crystal Reports and Surgical Compass as well as looked deeply into the preoperative process to define delays and areas for improvement (**Figure 1**) .

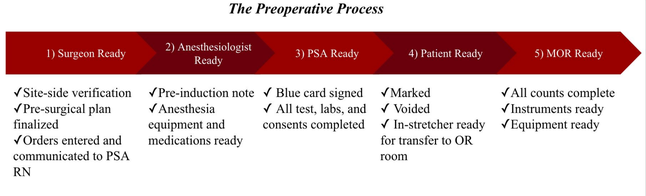


Figure 1: Components of the preoperative process that were reviewed in order to help delineate delay reasons.

METHODS (cont.)

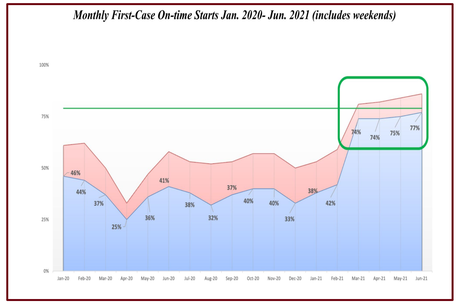
The Delay reasons which became areas of opportunities:

I. Preoperative Operations
II. Patient Transportation
III. Surgeon/Anesthesia Delays
IV. Communication of Case Order Sequence
V. Grand Rounds on Wednesday Educational Days
VI. Stop the Line

RESULTS

The primary delay reasons were categorized into three areas; from March 2021- June 2021 there were: 185 physician delays, 100 patient delays, and 49 system delays. We found that the top three interventions were improved communication between pre-surgical nurses and surgeons, clarification and stricter implementation of expected timeline before patient is in the OR, and improving methods for earlier patient wheel-in time, so for example, anesthesia could begin doing parallel work on blocks earlier. Incompleted covid test results statuses were followed up the day before surgery. Communication to ensure specialized case carts for surgeons was in the OR was conducted at 6AM before the first-case.Last minute pharmaceutical orders were communicated directly to the pharmacy rather than relying simply on computerized entries. Blood-work testing was reformed, depending on the patient's specific history, Housekeeping associates were hired to ensure timely patient transportation from pre-surgery to OR occured. To reinforce timely surgeon/anesthesia notes, the outcomes of timely notes and patient readiness were displayed on a communication board in the OR (without names). Repeated late notes by specific attendings were addressed by their respective chairs. Non-compliance led to considering implementing a policy of losing their privilege of first-case start. Any case-add on from the night before was communicated early at 6AM. Finally, we implemented a "stop the line" initiative where we provided recurrent reminders to staff to ensure that they were empowered and comfortable to let anyone know that they needed more time to finish a task.

RESULTS (cont.)



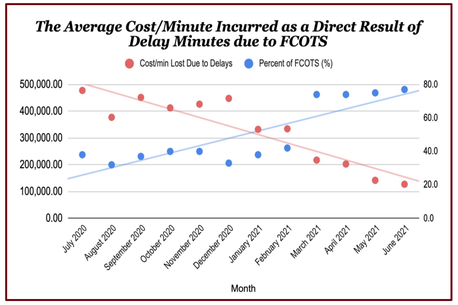


Figure 2 (left): Monthly FCOTS rate, including grace period (in the green rectangle).
Figure 3 (right): The average cost/minute lost due to delay minutes in FCOTTS.

Pre-intervention, the baseline for FCOTS was 38% with a 5-minute grace period FCOTS rate of 54%. Post-intervention, there was a 76% FCOTS while 84% of cases started within a 5-minute grace period. The grace period on time starts are inclusive of cases that start within the 5-minute grace period and that start on time absolutely. It costs $62/minute to run an OR (Pashankar et al. 2020) (**Figure 2**)). By tracking delay minutes in all of the OR in SBUH (not just main ORs where the initiative took place), we found that potentially $350,362 of hospital costs could have been saved from this initiative (**Figure 3**). Post-intervention, patient experience ratings went up 15%. We found that the identifying areas of improvement and implementing such interventions heavily lay on the support and work of all staff and stakeholders.

CONCLUSION

The success of improved FCOTS for SBUH was rooted in the daily huddle of the OR throughput committee that helped to identify reasons for delay, create and implement real-time solutions for delay improvement, and help solidify communications with all stakeholders.