

Improving the On-Time Start of First Surgical Cases

Dessa Fortuno Bondoc, MAN, RN, CPAN, CAPA; America J. Cuapio, BSN, RN, CPAN; Janette Linke, MSN, RN;
In Collaboration: Thaison Berg, BSN, RN; Kevin Rolfe, MD; Rebecca Chan, MD;
Alina Genie-Fernandez, MSN, RN, CNOR

Background

The first surgical case start time is a performance indicator of surgery efficiency. The widely accepted cost of delays in OR start time is \$62/minute, which means that 15 minutes of delay of a single OR case costs almost \$1,000. Delays in the operating room start time not only increases costs but likewise leads to patient and staff dissatisfaction.

The nurse-led interprofessional team at Rancho Los Amigos (RLA) identified opportunities for improvement within the departments of nursing, surgery, and anesthesia, to reduce the first case surgical delays in the operating rooms (OR).

Purpose

The goal of this quality improvement project is to decrease first case delays from 51% average in February 2023, to 25% by June 2023. The project aims to provide on-time care for patients, use resources efficiently, and improve perioperative workflow. Furthermore, starting on time prevents the ripple effect of delaying subsequent cases, which can negatively affect patient experience.

Problem Statement

For this project, the first case delay (FCD) is defined as the first surgical case with a >15-minute delay.

A report indicated that RLA's 5-month FCD averaged 51%. These delays pose a significant cost to the organization of about \$1000.00 for a delay of 15 minutes. Improvement was needed to ensure the efficient use of resources and the provision of timely quality care.

The nursing team's survey revealed that often, timely staff availability and communication were challenges. Nurses identified additional contributing factors such as errors in consents, long patient preparation (IV start, clipping, medication history, stat labs/diagnostics), complicated OR set up, and delays in transporting inpatients from unit to preop.

An interprofessional approach was necessary to achieve a significant impact in reducing the FCDs.

Methods

Utilizing a driver diagram, Ishikawa diagram and other tools, the nursing team identified FCD causes and noted the need for interprofessional (IP) collaboration.

The nursing team collaborated with the chairs of surgeons and anesthesiologists. Together, they developed a new audit tool that would provide information relevant to every department in the OR. Each specialty identified flaws in its pre-operative workflow and made changes based on priority, utilizing the Plan-Do-Study-Act (PDSA) methodology. A run chart was created to monitor the trend of FCDs. The pie chart showed the breakdown of reasons for delay based on the audit tool's findings.

Structure/Process

1st PDSA Cycle: Nursing assigned Voice Over Internet Protocol (VOIP) phones to each staff member. Directories, which included staff extensions and various hospital department numbers, were posted throughout the units. This intervention was based on the staff survey that showed that communication within and outside the department was unsatisfactory. Audit results were communicated regularly to raise goal awareness.

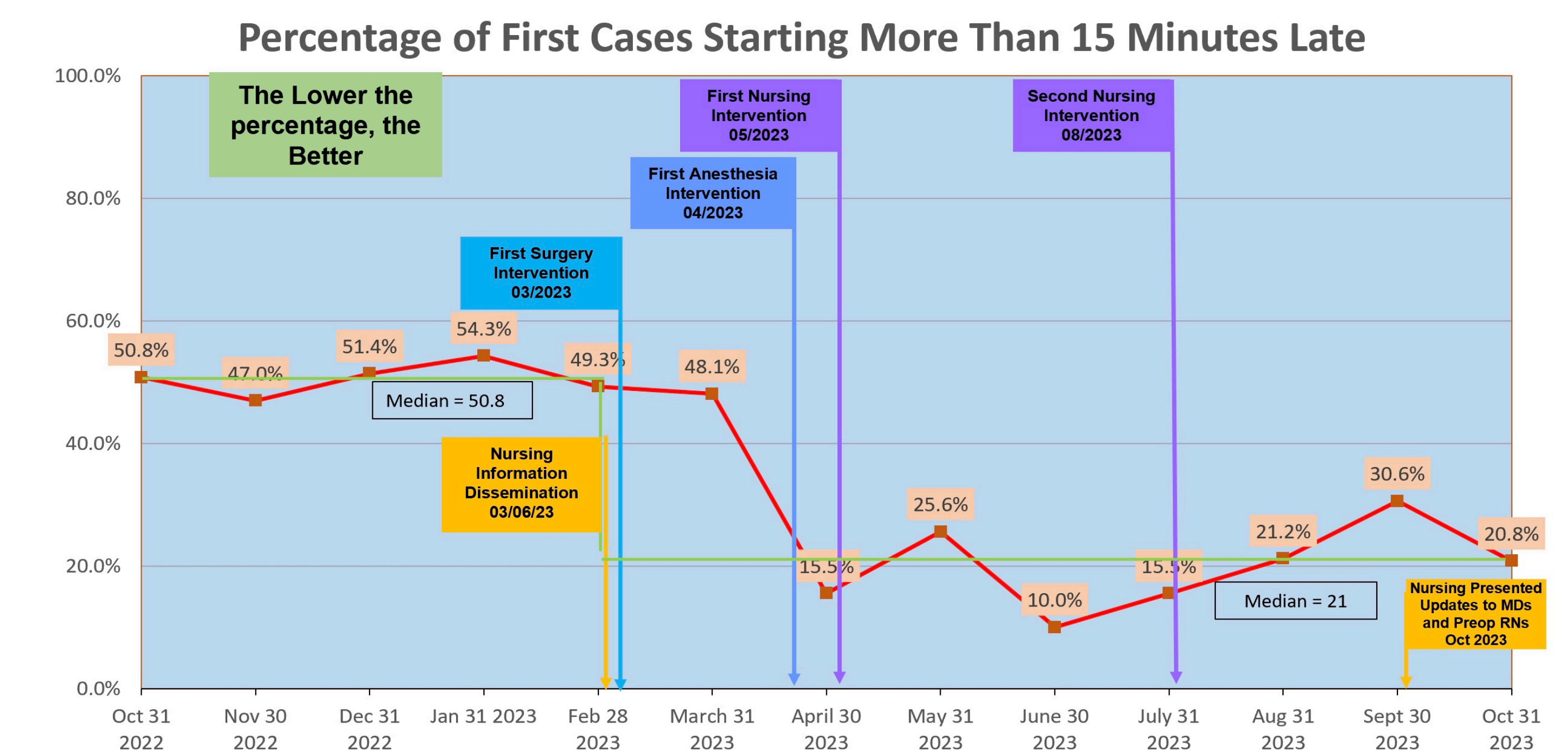
The surgeons received a reminder during their monthly meeting to arrive at the unit at a time that allows them to finish consents and documentation to prevent delays from their end.

The Anesthesia chair required CRNAs and/ or anesthesiologists at the patient's bedside by 7:25 AM. If the assigned provider is unable to be there on time, they communicate within their team and find another provider to take the patient to the OR, thereby starting the case on time at 7:30 AM.

2nd PDSA Cycle: Nursing created laminated cards that were placed by the doorway of each pre-op bay. It is a checklist of the common causes of nursing delays. These include the application or removal of AirPal, the need to shave (clip) the patient's hair, and the task of asking the patient to void one more time 10-15 minutes prior to surgery. OR nurses, CNAs and pre-op nurses shared responsibility in ensuring the tasks were completed.

Results

The nurse-led team achieved its goal and thereby significantly decreased the percentage of FCDs from an average of 51% in February 2023 to as low as 10% by June 30, 2023. The team continued to evaluate their performance through data collection and found that from March 2023 to October 2023 the FCD rate was sustained at 23.4% average. Additionally, in a post implementation survey, perioperative staff reported an improvement in communication among the interprofessional team.



Conclusion /Implications of Practice

Addressing the perennial problem of FCDs among hospitals results to on-time care for patients, efficient use of resources, and improves perioperative workflow.

This RLA initiative proves that communication among teams is a key element in successful process improvements. Perioperative nurses are the center of communication in the surgery department. They facilitate the coordination of all patient care activities. Therefore, through the nurses' leadership and interprofessional collaboration, the months-long high FCD at RLA was significantly reduced by more than half.

References

- Macario A. What does one minute of operating room time cost? J Clin Anesth. 2010 Jun;22(4):233-6. doi: 10.1016/j.jclinane.2010.02.003. PMID: 20522350.
- Pashankar DS, Zhao AM, Bathrick R, Taylor C, Boules H, Cowles RA, Grossman M. A Quality Improvement Project to Improve First Case On-time Starts in the Pediatric Operating Room. Pediatr Qual Saf 2020;4:e305.