

Accelerero Works with Hospital to Improve Perioperative Efficiency and Increase Case Volume



Improving first case on time starts and turnover time sets stage for additional joint replacement cases

■ AT A GLANCE

- 221 bed acute care hospital
- Member of four hospital integrated delivery network in New England
- Performs over 900 joint replacement cases per year

■ ISSUES

- Opportunity to improve perioperative efficiency to increase joint replacement cases
- Surgeons had a backlog of cases due to operating room capacity constraints
- Highly competitive region with patients having plenty of choices for joint replacement

■ RESULTS

- Improved first case on-time start from 45% to 81%
- Improved turnover time from 41 minutes to 26 minutes
- \$350K in perioperative time savings
- 15% increase in joint replacement cases in one year

INTRODUCTION

This hospital had been working with Accelerero for several years with focus on the preoperative and postoperative elements of joint replacement care. As the hospital's joint replacement cases increased over the last few years, the current perioperative environment became a limiting factor in further growth. The hospital enlisted Accelerero to help improve their perioperative efficiency in order to keep up with physician demand and satisfaction.

An initial assessment of the all aspects of the joint replacement perioperative processes was performed. The key process flow elements that needed improved were first case on time starts and turnover time. [FIGURE 1](#) and [FIGURE 2](#) show that in both of these metrics, the hospital was worse than the median in the Accelerero *OrthoVal*[®] database. The following were systematic opportunities that were not allowing the staff and administration to achieve their goals:

First Case On-Time Starts

- Surgeons and anesthesia arrival times were extremely variable and unpredictable
- Staffing patterns did not match first case staggered start volumes/times
- Patient arrival times were not adequate to meet start times
- Patient preparation processes were variable between staff members

Room Turnover

- Lack of consistency in staff responsibilities during room turnover
- The setup/open process was variable between staff members and inefficient
- Patients not being prepped when the OR was ready causing delays and downtime
- Opportunity for management to create expectations and accountability among staff

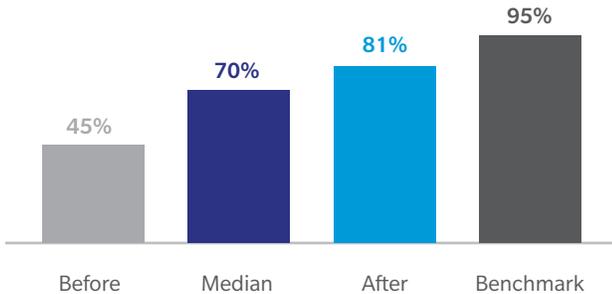


FIGURE 1 | Percent of first case on time starts for orthopedic cases comparing before and after to the Accelero *OrthoVal* database

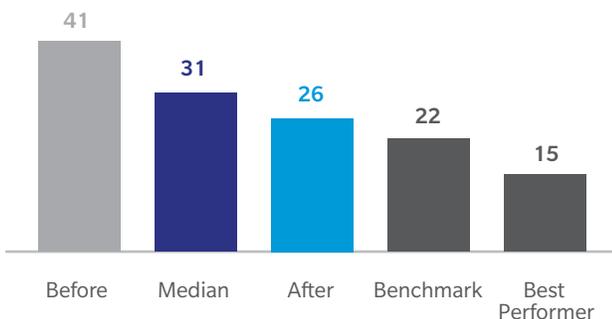


FIGURE 2 | Turnover time (patient out of room to next patient in room) in minutes for joint replacement cases comparing before and after to the Accelero *OrthoVal* database

SOLUTION

Following the assessment, Accelero’s perioperative team began implementation with focus on improving first case on-time start and turnover time. The following were action items Accelero implemented with the administration and staff to enhance patient flow and create a path to progress and meet internal performance goals:

First Case On-Time Starts

- Created consistent expectations for when providers needed to arrive when scheduled for first cases of the day
- Implemented first case on-time start policy that the OR committee could use to hold providers accountable for arrival times
- Created standardized patient preparation process and adjusted patient arrival times

- Implemented weekly multidisciplinary review to assess on-time starts and define opportunity for improvement
- Adjusted staggered starts to better match staffing patterns for the first case

Room Turnover

- Defined current process for multiple OR teams
- Identified variations in practice
- Performed multiple “in-room” workshops to re-engineer the cleaning and set-up process
- Improved the communication path between the OR and pre-op holding to ensure smooth and efficient care transitions
- Defined process owners and created reporting structure to create accountability
- Increased OR manager’s presence and implemented an audit schedule that allowed management to continue to work with staff to ensure sustainability

SUMMARY

As a result of the perioperative implementation, the hospital improved their first case on-time start for orthopedic cases from 45% to 81%. The joint replacement case turnover time improved from 41 minutes to 26 minutes. These improvements lead to over a \$350K in perioperative time savings. More importantly, these time savings along with some marketing and improved surgeon integration resulted in a 15% increase in joint replacement cases in one year, more than five times the market case growth (FIGURE 3). The perioperative time savings, the incremental joint replacement case margin and other savings from length of stay improvement led to an overall improvement of over \$2.0 million, a nearly 8:1 return on investment for the hospital based upon the Accelero fees.

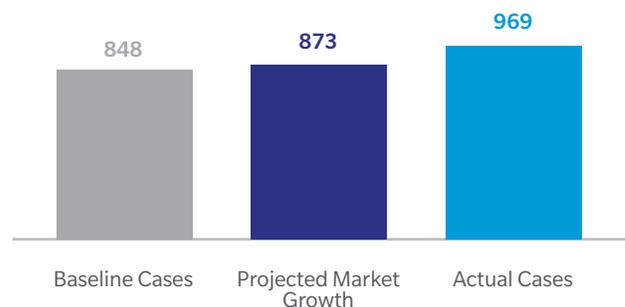


FIGURE 3 | Baseline and actual joint replacement cases showing a 15% increase in case growth as compared to a projected market increase of 3%