

Accelero Provides Plan to Help Surgeon Grow Joint Replacement Volume



Plan provides for efficient and standardized care, resulting in one more patient per surgical day

■ AT A GLANCE

- 201-bed acute care hospital
- Flagship hospital for regional non-profit health system
- Approximately 400 joint replacements per year

■ ISSUES

- Low market share for joint replacements
- Backlog of up to 14 weeks for elective joint surgeries
- Perioperative efficiency limiting growth

■ RESULTS

Identified opportunities to add 80 additional primary joint cases per year for one surgeon. The additional joint volume would generate an increase of \$632,000 of contribution margin per year for the hospital.

INTRODUCTION

The hospital is a full service, 201-bed community hospital in the Southeastern United States. Located within a campus that includes specialized facilities for heart and vascular care, maternity, cancer, and wellness, the hospital was interested in elevating their orthopedic capabilities.

The hospital's musculoskeletal service line had a low market share with little to no growth and a backlog up to 14 weeks for elective joint replacement procedures. There were multiple surgeons performing a low amount of joint replacement surgeries with the highest volume joint replacement surgeon interested in improving perioperative efficiency and throughput to support volume growth goals.

SOLUTION

Accelero Health Partners was brought in to assess the orthopedic perioperative services and create a plan to improve efficiency and throughput for all cases, but in particular joint replacement. The process included an analysis of the hospital's data, observation of perioperative areas, and interviews with the surgeons and relevant hospital personnel. Using Accelero's proprietary Success Factor Scoring protocol for perioperative gap analysis, the team then benchmarked the key elements – physician engagement and satisfaction, perioperative throughput, the level of patient care, and financial metrics – against high performing programs to identify opportunities for improvement.

Patient Optimization

Up to this point, patients were assessed two weeks prior to surgery; however, they were not fully educated with regard to the process and discharge expectations until the day of surgery, resulting in delays and cancellations. Similarly, the anesthesia protocol was often determined the day of surgery which sometimes caused delays and confusion. By fully preparing patients and standardizing anesthesia protocols, the hospital will be able to reduce surgical delays and cancellations. This will then result in patients being able to be discharged from the PACU to the unit to begin physical therapy sooner; resulting in a lower LOS.

Increased Perioperative Efficiency

Perioperative times were significantly higher than those in the Accelero hospital database. Standardizing work for the surgical team and performing many of the room set-up and patient prep work in parallel would reduce both the room turnover and 'Patient In' to 'Incision' times. Creating surgical team reviews, using a perioperative dashboard to track metrics, and mapping out the current process to identify barriers and non-value added actions should serve to reduce case time elements and waste.

TABLE 1 compares the hospital perioperative data to achievable targets identified by the Accelero team. These targets represent a 20% reduction in the overall case time for joint replacements and provide the capacity necessary to increase by one additional case per day.

Time in Minutes	Hospital	Target	Variance
'Patient In' to 'Incision'	23	23	0
'Incision' to 'First Stitch'	84	70	14
'Close' Process	28	20	8
'Close' to 'Patient Out'	11	10	1
Room Turnover	33	20	13
Total Time	179	143	36

TABLE 1 | Total knee and hip replacement perioperative times v. benchmark data.

Resource and Goal Alignment

Most critical for advancing the hospital's throughput for joint replacement surgery is to institute an orthopedic perioperative leadership team consisting of surgeons, anesthesia and OR management. This team is necessary to align intradepartmental activities, foster collaboration between the groups, coordinate the daily work, and enable timely decision-making when issues occur.

Additionally, physician-hospital goals for surgical blocks, acceptable practice metrics and volume must be discussed and agreed upon to ensure synergy and enhance physician satisfaction.

SUMMARY

Implementing the recommended changes will enable the surgeon to add one additional joint replacement surgery per surgical day and benefit the hospital, the surgeons and, most importantly, the patients. Adding one additional joint replacement two days per week over 40 weeks per year will generate over \$632,000 in additional contribution margin for the hospital and approximately \$96,000 in additional professional fees for the surgeon. Additionally, the perioperative efficiency created will help to reduce the cost for all orthopedic procedures and shorten the long wait for elective surgeries.