

Accelero Provides Strategic Plan for Orthopedic Program Growth



Identifies opportunities to improve care, solidify referral network and limit leakage to urban facilities

■ AT A GLANCE

- 350-bed, payer-owned acute care hospital
- Member of one of the two competing hospital networks in a large metropolitan area
- 428 joint replacements and 1,350 inpatient orthopedic procedures per year

■ ISSUES

- Declining market share
- Increased competition in local market
- Low market awareness and patient satisfaction scores

■ RESULTS

Identified over \$1.1 million in financial savings and new revenue opportunities for the joint product line.

INTRODUCTION

The hospital is a 350-bed acute care hospital that is part of a payer-owned integrated delivery network (IDN) located in a large metropolitan area. The hospital has a comprehensive musculoskeletal service line and conducted 1,350 inpatient and 1,620 outpatient procedures in the past year. Although a significant share of elective orthopedic patients has historically gone to the better known city-based facilities, the major competitor recently placed a new hospital less than a mile away, dramatically increasing competition in the area. Accelero was brought in to provide a strategic plan to strengthen the hospital's market position by improving the quality of care and minimizing the leakage of elective surgery patients to the city.

FINDINGS

The hospital is a part of a seven hospital, payer-owned delivery network that includes seven regional outpatient surgical and diagnostic centers. A full service provider, the hospital has an acclaimed joint and spine center. Despite all of this, patient satisfaction and community awareness is low, negatively impacting their competitive position.

The musculoskeletal service line generates \$5.8 million in contribution margin annually; \$4.0 million through inpatient procedures. Looking at the inpatient market, an analysis of the hospital market share for each of the three major musculoskeletal product lines can be seen in **FIGURE 1**.

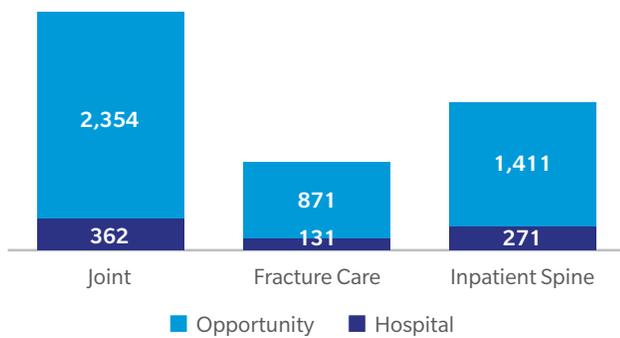


FIGURE 1 | Hospital procedures performed v. opportunity in their market.

Based on the market demographics and market share data, the joint product line represents the best short-term opportunity for growth with more than 2,000 procedures being done by the competition.

Joint replacement cases have declined by 23.8% in the past two years. With a 21% market share, the hospital is second in their primary service area to a larger, city-based competitor.

Average payments for total joint replacements in the area are low, with commercial payments only marginally higher than Medicare. Therefore, cost containment and efficiency are critical.

The hospital metrics for OR utilization, first case on-time starts and perioperative case times are all below average. Longer procedures contribute to higher variable costs for joint replacement procedures and the high coded complication rate of 17.5%.

Inpatient costs are directly related to the average length of stay. **FIGURE 2** shows the hospital's length of stay distribution for total hip and knee replacement patients. Comparing length of stay, by day, to the Accelerometer database, the hospital ranks in the lowest 25th percentile for three days or less.

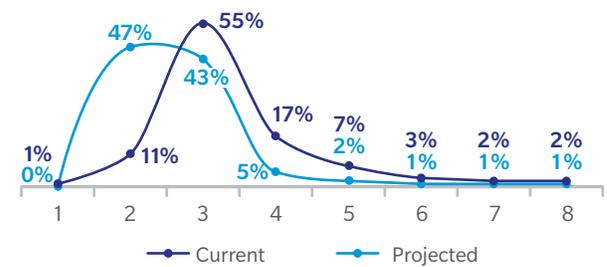


FIGURE 2 | Length of stay distribution for total hip and knee replacements at the hospital.

Because the hospital is payer-owned, discharge disposition is critical in shaping the total cost of care to the organization. The hospital discharged 74% to home or home care, slightly higher than the 50th percentile in the Accelerometer hospital database (**FIGURE 3**). On average, discharging total joint replacement cases to home or home health is \$5400 less costly per case (for the payer) than discharging to inpatient care.

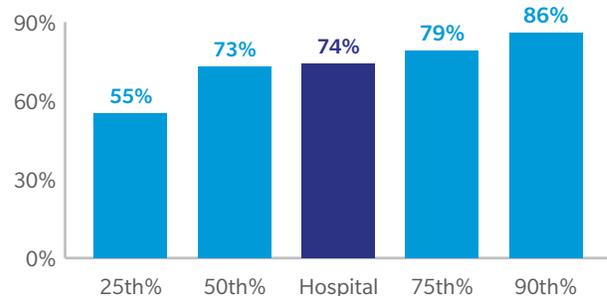


FIGURE 3 | Percentages of total knee and hip replacement patients discharged to home.

RECOMMENDATIONS

Based on the opportunity, the initial focus was on the joint product line with an emphasis on total knee and hip replacements. The best opportunities to improve the total cost of care and increase volume are through increased perioperative efficiency, reduced length of stay, and lower post-discharge care costs.

Perioperative Efficiency

Perioperative times were analyzed and compared to data obtained from the Accelerero hospital database. Creating surgical team reviews, using a perioperative dashboard to track metrics and enlisting lean methodologies will help to improve utilization by reducing case time elements, first case on time starts, waste, and variability between surgeons. Realistic and achievable targets have been created which would save the hospital 49 minutes per total hip or knee replacement (TABLE 1).

Time in Minutes	Hospital	Target	Variance
Delays in First Case Starts	11	0	11
'Patient In' to 'Cut'	40	25	12
'Cut' to 'Close'	82	72	10
'Close' to 'Patient Out'	5	5	5
Room Turnover	33	25	8
Total Time	209	127	49

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

The benefit of these savings can be viewed in two ways: 1) reduce the variable cost of the procedures, or 2) increase capacity for growth. In terms of the hospital, both are relevant. Operating room resources are limited, so these improvements would enable the hospital to add more volume while reducing the cost per surgical procedure.

Length of Stay

Creating a formal joint replacement product line team with a joint coordinator, establishing consistency in the care plans and ensuring standardized pre-operative patient education will improve the coordination of care for joint replacement patients.

Using a dashboard of key performance indicators will support effective, long-term management of the program. The cumulative effect of these initiatives will help the hospital to move to a two-day pathway for total knee and hip replacement patients, resulting in better outcomes, improved patient satisfaction and lower inpatient costs.

Post-discharge Care

Decreasing the cost of post-discharge care requires a higher percentage of total knee and hip replacement patients being discharged to home or home care. This can be done by ensuring all patients undergo pre-operative education where expectations and goals are set. These goals must then be reinforced throughout the stay to ensure patients are mentally and physically prepared to be discharged to home. Early mobilization and integrating home healthcare into the process will help to ensure timely post-discharge care.

SUMMARY

Accelerero analyzed the musculoskeletal service line and provided a plan to improve efficiency and revenue. The primary focus of this paper is on the joint replacement product line, due to the significant opportunity at hand. By implementing the recommended procedures and processes, the hospital should be able to realize over \$1.1 million in added efficiency and new revenue for the joint replacement line (TABLE 2). Additionally, these improvements will enable the hospital to improve patient satisfaction, increase capacity and capture a sizable share of the more than 2,000 joint replacements being conducted by competitors in the primary and secondary markets served by the hospital.

Impact Area	Financial Impact
Perioperative opportunity	\$745,360
Length of stay savings-joints	\$173,170
Discharge to home savings	\$232,200
Total Opportunity	\$1,150,730

TABLE 2 | Total knee and hip replacement perioperative times v. benchmark data.



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