

Accelero Helps Hospital to Reduce Complication Rates



Improved processes and data management contribute to significantly lower complication rates for joint replacement patients

■ AT A GLANCE

- 532-bed hospital that is part of a regional health system in the Midwest
- Over 600 total joint replacements per year
- Pursuing Joint Commission Disease-Specific Care Certification

■ ISSUES

- Higher than average complication rates for total hip and knee replacement patients
- No established preoperative risk reduction protocols
- Inconsistent postoperative care process

■ RESULTS

Coded complication rates decreased from 12.3% to 5.4% for total hip replacements and from 12.7% to 6.8% for total knee replacements.

INTRODUCTION

The hospital, a 532-bed hospital in the Midwest that is part of a regional health system, has a long term relationship with Accelero Health Partners. The partnership progressed from developing their musculoskeletal service line to pursuing Joint Commission certification for both their total hip and total knee replacement programs.

The hospital was a top performer in the system regarding metrics such as length of stay and discharge to home for total joint replacement patients. However, their coded complication rates for both total hip replacements and total knee replacements was higher than the national average. Because this information is publically available, it can affect both payer reimbursement and new patient acquisition.

SOLUTION

Accelero worked with the hospital to improve their joint program metrics as part of the certification process. Improved data analysis, patient optimization and postoperative care helped them to significantly lower their complication rates for joint replacement patients.

Data Analysis

Using *OrthoVal*[®], Accelero's orthopedic business intelligence tool, the hospital was able to look at their complications in a more granular fashion (TABLE 1).

Complication Groupings	Percentage of complications
Urinary Complications	50.6%
Respiratory Complications	21.1%
Renal Failure	18.5%
Surgical Complications	7.4%
DVT/PE	1.2%
Cardiac Complications	1.2%
Sepsis	0.0%
Iatrogenic Hypotension	0.0%
Digestive System Complications	0.0%

TABLE 1 | Joint replacement complications by clinical grouping and percentage of the total.

This level of detail enabled the hospital to identify the specific cause of each complication and discern the impact via length of stay data.

Patient Optimization

Effectively optimizing all joint replacement patients required consistent processes, preoperative testing and education. Due to the high percentage of urinary and respiratory complications, the hospital paid special attention identifying and treating potential urinary issues, obstructive sleep apnea, cardiac disease and diabetes. Additionally, processes were implemented across the care continuum to minimize complications.

Postoperative Care

Accelero identified several changes to the postoperative care process that resulted in better, more consistent care with fewer complications. The move from general anesthesia to a short acting spinal dramatically reduced the need for a urinary catheter and urinary complications declined by 85%. A new pain management protocol with less opioids resulted in less nausea and earlier patient mobility. For consistency, a nurse practitioner was assigned to coordinate care for all joint replacement patients. A joint replacement dashboard review with key stakeholders was also implemented to provide timely feedback and decision making.

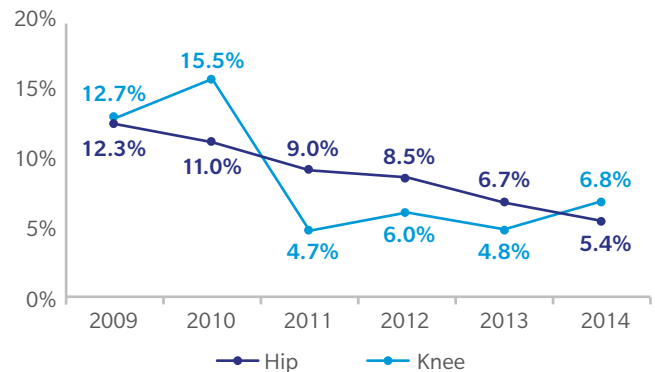


FIGURE 1 | Joint replacement coded complication rate over time.

SUMMARY

To further improve and differentiate their joint replacement program, the hospital was seeking Joint Commission Disease-Specific Care Certification. This required a conscious effort to reduce the coded complication rate for total hip and total knee replacement patients. Improved patient optimization, postoperative care, tracking and data management have helped the hospital to reduce their complications by 56.1% (from 12.3% to 5.4%) for total hip replacements and 46.5% (from 12.7% to 6.8%) for total knee replacements. (FIGURE 1). The result is an estimated savings of \$30,000, higher patient satisfaction and an improved reputation for the joint program.