

Accelerero Helps Improve Joint Replacement Perioperative Times



First case starts and room turnover critical for new joint center of excellence

■ AT A GLANCE

- IDN looking to create a Joint Replacement Center of Excellence
- Over 1,200 annual joint replacements
- Need to streamline perioperative processes

■ ISSUES

- Historically poor first-case on-time starts
- Longer than normal room turnover times
- No joint-specific perioperative focus

■ RESULTS

Accelerero created the infrastructure for a new joint replacement program, resulting in a 57% improvement in on-time starts and an average savings of 14 minutes per room turnover.

INTRODUCTION

The health system, an IDN located in the Great Lakes region of the United States, decided to create a Joint Replacement Center of Excellence. Management believed they could improve care and create efficiencies by combining the joint replacement programs at their academic medical center with that of the community hospital, in one location. Also affected were joint replacement surgeons from several practices that used the two hospitals.

Although there were recent renovations and staffing changes at the community hospital prior to the consolidation of the joint program, both hospitals historically had average-to-poor perioperative efficiency. For example, the first-case on-time starts for joint replacement cases was 22%; 42% of the case starts were at least 11 minutes late. Average turnover time between cases was 44 minutes for total knee replacements and 42 minutes for total hip replacements. The health system recognized the need to create perioperative processes that would benefit the patient, the hospital and most importantly, the surgeons.

SOLUTION

The health system contracted with Accelero Health Partners to improve perioperative services at the community hospital, with a focus on joint replacement cases. The initial engagement consisted of an in-depth assessment by the Accelero perioperative team to determine the root causes of the deficient metrics and develop a plan. Subsequently, Accelero worked with the hospital over a four month period to establish the program infrastructure for the Joint Replacement Center of Excellence, define metrics, set goals, and create processes to improve first-case on-time starts and turnover times.

Perioperative Infrastructure

The first stage of the implementation process involved creating a perioperative infrastructure with surgeon leadership and representation from all perioperative stakeholders. This infrastructure was necessary to set priorities, define metrics and develop goals for the program. The work was done with input from Accelero and two new work teams – one for first-case on-time starts and one for turnover processes.

First-case On-time Starts

The team, with the facilitation of Accelero, mapped out the current first-case process steps, identified wasted steps and created a more efficient first-case process. Goals were set and controls were instituted to allow for the constant evaluation and remedy for any late starts. Within a three month period of time, the first-case on-time starts improved from a baseline of 22% to 79% (FIGURE 1).

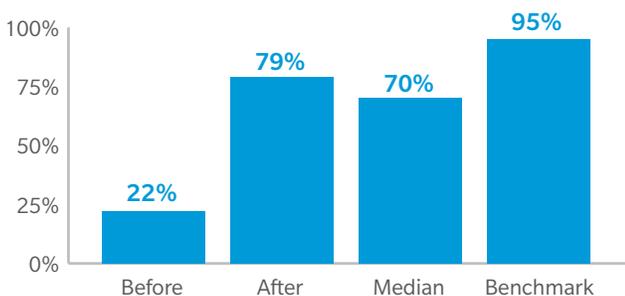


FIGURE 1 | Joint replacement on-time start results.

Turnover Time

Current turnover processes were mapped out to identify processes that could be completed in parallel, for reduced overall turnover time. Individuals involved in the turnover process were given specific duties to perform and tracking controls were put in place. The result was a significant decrease in room turnover time for both total hip and total knee replacements (FIGURE 2).

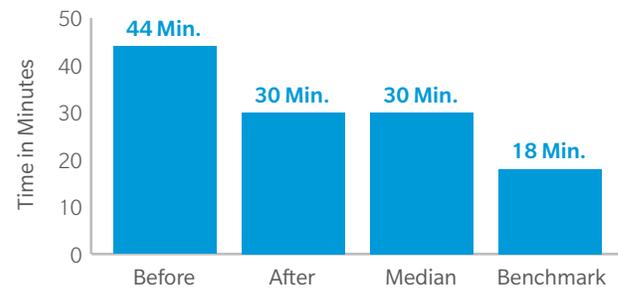


FIGURE 2 | Joint replacement room turnover time results.

SUMMARY

The ultimate goal of the health system was to create a joint replacement center that provided value to their patients and surgeons. Management recognized the need to begin with an efficient perioperative environment – enabling joint replacement surgeons to perform more cases within their perioperative blocks. Beginning with first-case on-time starts and room turnover yielded substantial savings. One of the joint replacement surgeons specifically recognized the contributions of Accelero Health Partners, including the use of concrete data and specific tasks to accomplish team goals. The group is now evaluating surgical case time elements ('Patient In' to 'Incision,' 'Incision' to 'Close') to enable greater time savings.