Accelero Improves Orthopedic Throughput at European Hospital

Standardization adds consistency and efficiency to orthopedic perioperative process

**AT A GLANCE**
- Large, academic hospital in Northern Europe
- Considered a “Center of Excellence” in the region
- Over 6,000 orthopedic surgeries with 1,000 hip fractures per year

**ISSUES**
- First case starts often delayed
- Low perioperative throughput
- Staff dissatisfaction due to long surgical days

**RESULTS**
Changes to the orthopedic perioperative process resulted in a 100% first case on-time start rate, a 24% reduction in room turnover time and a higher percentage of patients receiving physiotherapy on the day of surgery.

**INTRODUCTION**
Accelero Health Partners was hired to improve the orthopedic efficiency for a large hospital in Northern Europe. The hospital is a large academic hospital with an equally large emergency department. The hospital performs approximately 6,000 orthopedic surgeries per year with nearly 1,000 of the cases resulting from accidental hip fractures via the emergency department.

Accelero provided the hospital with an assessment and detailed plan to improve patient care and perioperative efficiency. The assessment revealed a significant opportunity to improve both first case on-time starts and room turnover times. Hospital management initially decided to implement the changes internally. After six months of limited progress, Accelero was contracted to implement the recommended changes.
SOLUTION
Accelero worked with the hospital’s perioperative teams to videotape the preoperative processes and timing of subsequent cases. The team used the recording to identify short-comings in the perioperative process. As a result, a parallel process was implemented that would minimize staff downtime between tasks. The process was used to add consistency across the operating theatres. To ensure operational efficiency, a proactive approach with clear expectations was communicated to each team member.

A multidisciplinary project team – consisting of an orthopedic surgeon, anesthesiologist, perioperative manager and nursing – was formed to redesign the preoperative and perioperative processes at the hospital. As a first step, Accelero arranged for the team to observe the perioperative process at a highly efficient joint replacement program. Next, the process was reworked to improve staff and surgeon efficiency. As part of the project the team created: a detailed work plan, program metrics with reporting dashboards, response plans for program management and visual aids detailing the process flow.

RESULTS
Enlisting Accelero to implement the required changes resulted in significant improvements to both first case starts and room turnover time.

First Case On-Time Starts
The hospital was able to improve their on-time start rate from 38% to 100% (FIGURE 1). Additionally, the average late start was 21 minutes. Therefore, the hospital effectively saved 13 minutes per operating theatre per day.

Room Turnover
Moving to a parallel process resulted in an average savings of ten minutes per room turnover. The teams have also developed action plans for continual improvement with the benchmark metric as the goal (FIGURE 2).

SUMMARY
Accelero was contracted to implement a plan to improve orthopedic perioperative efficiency with a focus on first case starts and room turnover. Over the course of four months, the hospital was able to achieve a 100% first case on-time start rate and reduced their room turnover time by an average of 10 minutes. Most important to the staff, procedures are now more consistent and finish approximately 75 minutes sooner than before. This added efficiency has enabled a higher percentage of patients to receive physiotherapy on the day of surgery, starting the recovery process sooner. Additionally, depending on case load, the time savings will allow for one additional case per operating theatre per day.

FIGURE 1 | A comparison of the hospital’s first case on-time start percentage to the Accelero OrthoVal® database.

FIGURE 2 | A comparison of the hospital’s room turnover times to the Accelero OrthoVal® database.