
Volume 14 - Issue 4, 2014 - Technology Update

Accelero - a Subsidiary of Zimmer

Identifies Opportunities for European Hospital to Improve Perioperative Efficiency

Standardised perioperative process to improve orthopedic surgical throughput

Introduction

Accelero Health Partners was hired to evaluate the orthopedic perioperative process for a hospital in a major European city. The hospital is one of the large academic hospitals in Northern Europe with an equally large emergency department. The orthopaedic group performs approximately 6,000 surgeries per year, both scheduled and unscheduled, with nearly 1,000 resulting from accidental hip fractures.

The hospital is experiencing a decrease in the average reimbursement rate with a coinciding increase in the number of cases. To more effectively manage the growth, a new unit of OR suites was opened to accommodate the scheduled cases. However, current processes were limiting throughput to three joint arthroplasties per OR per day. Furthermore, staffing guidelines required all procedures to be completed by 4:00 pm.

Accelero was asked to provide insights and recommendations that would enable the hospital to increase orthopedic perioperative throughput and accommodate the budgeted case volume. Accelero team members went onsite to identify inefficiencies via benchmarking, observation of operating room procedures, patient flow review and interviews with key stakeholders.

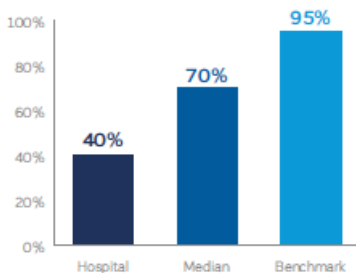


FIGURE 1. First case on-time starts for the hospital v. the Accelero database.

Findings

The hospital had established a goal of four joint arthroplasties per OR per surgical day. The timing of first case starts and a longer than normal room turnover were seen as the primary reasons the hospital was not meeting this goal. FIGURE 1 shows the first case on-time starts of the hospital versus benchmarking data obtained from Accelero's proprietary database for joint arthroplasty cases.

First case on-time starts were well below the industry calculated based on the Accelero database due to variations in patient arrival times, poor communication, insufficient organization of materials and supplies and unclear expectations.

Inefficient processes that varied by staff members and a lack of clear expectations contributed to average room turnover times of 41 minutes between joint arthroplasty procedures, significantly higher than the average for hospitals in the Accelero database (FIGURE 2).

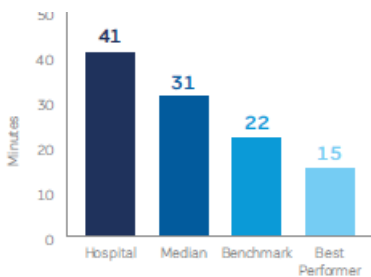


FIGURE 2. Room turnover times for the hospital v. the Accelero database.

Recommendations

At the request of the hospital, Accelero presented a plan to meet current demand and case volume by improving first case on-time starts and room turnover.

First Case On-Time Start

Accelero's solution to meet or exceed the benchmark for on-time starts consisted of:

- Clearly define and communicate the time patients need to arrive in both the pre-op area and the OR
- Develop a process flow document with responsibilities and timing of events for all staff members so they have clear expectations for daily arrival and tasks
- Create protocols to ensure all anaesthesia and instrument case carts are fully stocked in advance
- Implement tracking methodology with an action plan for unprepared carts

Room Turnover

The proprietary Accelero hospital database was used to establish a room turnover goal of 22 minutes. The steps required to meet this goal consisted of:

- Clearly define and communicate goals
- Establish a multidisciplinary team of OR staff, management, housekeeping and anaesthesia to focus specifically on room turnover process improvement
- Utilise lean methodologies to create standard work and eliminate wasteful efforts for all stakeholders
- Create control documents for monitoring progress with action plans for slow room turnover

Summary

Accelero confirmed that a low percentage of the daily first cases were starting on time. In addition, long room turnover time was identified as a limiting factor in meeting the hospital's joint arthroplasty volume goals. After a thorough analysis, Accelero provided a plan to add one more joint arthroplasty per OR per surgical day during normal operating room hours.



Accelero Health Partners, a subsidiary of Zimmer Holdings, Inc.
 360 Southpointe Boulevard, Plaza II, Suite 400 | Canonsburg, PA 15317
 Phone: 724-743-3760 | www.accelerohealth.com
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For more information visit: <http://www.personalfitinfo.zimmer.com>
 or contact our Zimmer Hospital Services & Solutions Team
 Michael Handwerker, MD, PhD
 Phone: +41-58-8548374
michael.handwerker@zimmer.com



Published on : Sat, 8 Nov 2014