

Outcomes

- A reduction of 40% in OR turnaround time, translating to 160 hours of OR time annually.
- Improve the quality of the turnaround.
- Improve staff and physician satisfaction.

To smooth transitions and hand-offs, like Operating Room (OR) turnaround time, some hospitals have even borrowed ideas from the highly efficient procedural choreography of auto racing—the pit stop¹. The intent of the OR Kaizen at a 260-bed, for-profit medical center in Rome, Georgia, was to develop and implement optimal procedures for General Surgery room turnarounds. Efficient and safe room turnarounds are important, because they govern whether the next case will begin on time, with all necessary conditions and tools at the ready. Like an automotive pit stop, a smooth OR transition means taking only the time required, and using standard work to make sure nothing is overlooked. HPP was called upon to facilitate and teach Lean process improvement techniques to improve their OR turnaround times.

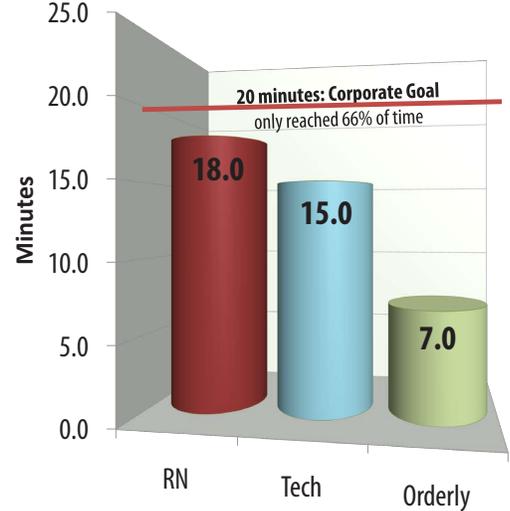
The Current Condition

The OR was meeting the corporate goal for turnaround time—20 minutes—about 66 percent of the time. The Kaizen team’s observations revealed that, if everything went perfectly, the nurse had nearly 20 minutes’ worth of work to do. The number of team members involved in the turnover, including technicians and orderlies, varied between cases, as did the number and types of tasks.

Looking at the process with new eyes, the team wondered:

- Which tasks truly had to be done during the critical turnaround time? Which could be performed before or after, or as part of other work?
- What efficiencies could be gained for the remaining tasks performed during turnaround?

Average Case Internal Turnaround Time, Current State



Internal versus external tasks

When turnaround time is framed as a pit stop, it is easier to see that the “internal” or live time must be used only for the most crucial tasks. For example, the pit crew only tightens the lug nuts during the pit stop. Other tasks, like filling the tires, are pushed to the “external” time frame, either before or after turnaround.

In one example, the OR technician would use “internal” turnaround time to go to another area of the hospital to pick up instruments for the next case. The team found a way to free up the technician’s time during the prior case to retrieve the instruments for the next case. Pushing this task into “external” time made the technician more available during the turnaround.

In another instance, the nurse often used turnaround time to deliver a specimen to the laboratory. The Kaizen team found a way to create a drop-off area for specimens, returning that nurse’s time to the turnaround.

¹ Naik G. New formula: A hospital races to learn lessons of Ferrari pit stop. Wall Street Journal, November 14, 2006. A1.

Reducing Waste

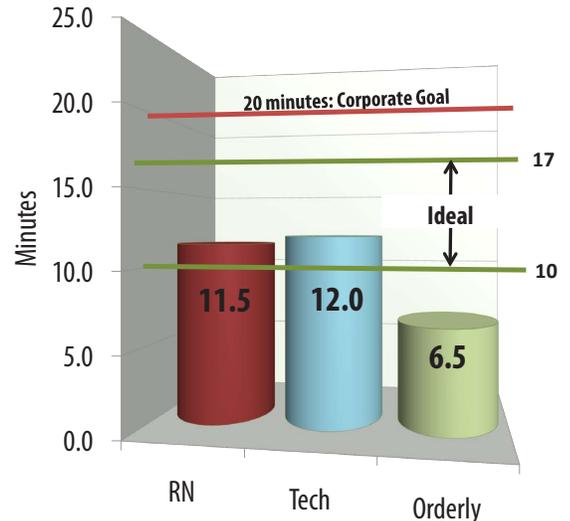
After off-loading unnecessary tasks into “external” time, the Kaizen team looked at ways to reduce wasted steps, confusion, and extra motion during turnaround. They watched the nurse transport the patient to the PACU, then return to the OR where the computer was located, complete the charting there, then go to the pre-op holding area to retrieve the next patient. Putting a computer in the PACU, where the nurse could complete charting closer to the patient and eliminate an extra trip back to the OR, saved a crucial two minutes of key RN time during turnaround, and made the job easier.

The team also found variation in the number of people working during a turnaround—between three and eight staff members. They created a way to level and standardize the workload, and make the number of people more predictable and sensible.

The cleaning solution

Above all, the OR must be clean. The current cleaning solution required that the surfaces soak in it for 10 minutes. Reexamining this amount of wait time made it unacceptable, and set the team to seeking another cleaning solution. When they found a product that only required one minute of soak time to achieve the same level of cleanliness, they switched to it. They then designed standard work to build in the required minute during the turnaround.

Average Case Internal Turnaround Time, Future State



The trial

The hospital staff made several successful trial runs using their new procedures. These results indicate:

- A reduction of eight minutes (40%) in turnaround time, translating to 160 hours of OR time annually.
- Improve the quality of the turnaround.
- Improve staff and physician satisfaction.