TriStar Health System, a division of HCA (Hospital Corporation of America), is a system of 18 hospitals spanning from Atlanta, Georgia to Nashville, Tennessee. The average daily census of the hospitals ranges from 6 to 450, and the number of operating rooms in each hospital ranges from 1 to 20. In 2006, TriStar decided to focus its process improvement efforts on operating rooms in order to compete with outpatient surgery centers and grow the surgical business. Variation in size and practice over the years has led to variation in performance. In order to take advantage of the size and dynamics of the division, common metrics were established to allow benchmarking and foster competition amongst the hospitals.

The division goals were to make each operating room world class in efficiency while simultaneously improving surgeon, staff, and patient satisfaction. The satisfaction of all three groups was key to growing volume and sustaining improvement. TriStar Leadership recognized that the efficiency of an operating room greatly impacts surgeon satisfaction. In addition, leadership recognized the link between staff satisfaction and surgeon satisfaction, and therefore involved staff in all process improvement decisions. Optimizing both surgeon and staff satisfaction would maximize the benefit to TriStar patients.

Metrics were developed that directly tied to these overall strategies. The metrics chosen to track were First Case On-Time Starts, Surgeon Turnaround Time, Scheduling Accuracy, and Prime Time Utilization.

Once the metrics were established, a reliable and efficient way to calculate and distribute metric data had to be developed. The format had to be easy to use and navigate, and accountability had to be created in order to gain ownership of the numbers. After much planning and development, a Microsoft Excel file called “The OR Tool” was developed by a group of Management Engineers from across HCA. The data is downloaded on a monthly basis from the electronic documentation system, Meditech, and is imported into an excel file. Each OR Director has an excel tool for their facility, and the tools are distributed via a server location on a monthly basis.

The tool includes an extensive number of reports grouped by metric. There is the ability to see a high-level overview of metric performance, and to get down to the details in looking at data by Surgeon, Circulator, Specialty, etc. The OR Tools were designed with the end user in mind with easy button navigation, intuitive report design, and simple comparisons between staff members, specialties, and Surgeons (see Figure 1, below). The excel file’s button functionality was created using simple macros in Visual Basic
When the OR Tools are sent out to the directors each month, OR Executive Reports are also distributed to the hospital administration teams. In order to produce the most usable and interpretable data, the division works with the OR staff and administration to adjust reporting content and format as necessary.

Once the initial design work was complete, it was time to begin implementing the new system. In order to facilitate rapid acceptance of the metrics and accountability to the numbers, the first Surgical Services Process Improvement Summit was held for the division. This was a one day meeting held in July of 2006. It was an initial meeting to kick off the OR Process Improvement initiatives, and was attended by OR Directors, division staff, and facility administration representatives. The purpose of the summit was to roll out the key metrics to drive efficiency improvement, distribute a Surgical Services PI Workbook, decide on priority initiatives, and establish strategies to follow up on improvement progress.

The PI workbook contained sections that presented improvement options for all aspects of the OR work system. The section titles were “OR Ready”, “Patient Ready”, and “Staff Ready”. It was adapted from a book that another division of HCA, the West Florida Division, had created from work that had been done in their hospitals.

The workbook does not define an exact prescription for improving the OR departments, it is more of a formulary of possible improvement ideas. Each initiative details one process area to focus on and improve, and it is up to the director to determine which initiatives will help to improve their departments.

After 8 months passed, results were quite varied with slight to moderate improvements in Surgeon Turnaround Time and First Case On-Time Starts. There weren’t many examples of sustained improvement from across the division. The most improved OR’s had created team leaders for initiatives, educated their front-line staff on the metrics, and involved their RNs, Techs, Aides, and other staff members in the problem solving process. In order to refocus efforts and share best practices, a second OR Summit was planned.

Held in May of 2007, the purposes of this second summit were to review progress on initiatives and metrics, have OR Directors present and share best demonstrated practices, discuss barriers to initiative completion, and redefine process improvement priorities and goals for OR Metric improvement. The goals still focused the original metrics: Surgeon Turnaround Time and First Case On-Time Starts, but facility-specific goals were set based on current performance, with staggered improvement levels by current run rate. For example, for First Case On-Time Starts, if an OR was running 10-30%, a 30% improvement was targeted. If they were running 31-50%, a 20% improvement was desired (see Figure 2, below). The same graduated improvement goals system was used for Surgeon Turnaround time targets. The timeline for attaining the set goals was five months.
By September 2007 (four months after the May Summit), many OR’s had reached their First Case On-Time Starts goals, and almost all had improved on this metric. Some OR’s had reached their Surgeon Turnaround time goals, but not as much progress was seen with this metric. In a period of four months, the First Case On-Time Starts percentage went from 46 percent to 56 percent as a division (a 23% improvement). A couple OR’s saw seven to eight minute reductions in Surgeon Turnaround time over the same time period (15 and 20% reductions, respectively). The division’s performance as of September 2008 can be seen at the end of this article (Figure 3).

The keys to the success of the division process improvement program were:

- Define metrics that tie to your growth strategies
- Create easy to use reports to convey metrics
- Focus on improving one or two processes
- Share ideas and best practices between hospitals and departments
- Set goals, and track results (Good, Bad, or Ugly)

Some lessons that the TriStar division has learned through this surgical services improvement process are:

- Listen to your directors and those that will use the data – they know it best
- Don’t be afraid to change the metrics, as long as it is for the better
- You won’t gain instant ownership and acceptance of the data, but don’t be discouraged
- Director presentations of best practices are VERY powerful
- Change takes time!!!

The future focus areas for the division include standardizing key processes prior to the day of surgery. Possibilities will be Pre-Admission testing, Chart Management, Block Scheduling Policies, HQA SCIP metrics improvement, and the Scheduling Process. Goals will be set for continuous improvement, and Surgeon Turnaround Time will be evaluated by specialty to account for naturally high variation between different specialties. The process improvement methodologies, reports, and summit structure will continue to be evaluated in the pursuit of making each of the operating rooms in the division “world class” in efficiency and performance.

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Figure 3: FCOTS Progress Over 3 Years

% First Case On Time Starts

Goal = 90%

Legend:
- Sep 2005
- Sep 2006
- Sep 2007
- Sep 2008