



Operating Room Efficiency Improvement via 5S Kaizen Event

A goal was established to improve the quality and efficiency of operating room (OR) surgery support based on the following objectives:

- Improve overall OR area organization and reduce clutter
- Eliminate, store and consolidate unneeded equipment/inventory where possible
- Equipment used most often should be readily available and easily located
- Improve overall compliance with safety
- Identify physical layout improvements

Note that performing a Kaizen event in operating room corridors involved several constraints. For example, the team wanted to avoid moving items without doctors' concurrence. Also, it was decided a Kaizen could not be done during normal work hours. A 'virtual' kaizen was therefore performed whereby a detailed, prioritized action item list and risk assessment was created for gradual, measured implementation.

Current state measures of the OR area was documented as follows:

- The existing OR layout, items location, and traffic patterns were mapped to enable identification of problems/issues/opportunities
- Items in the operating room corridors were identified and counted (this established a current state inventory)
- Safety shut-offs, fire extinguishers, electrical was identified on the layout and photographs were taken
- Labels & signage needs were identified as well as where items should be placed
- Inventory, excess inventory, supplies and supply carts were identified along with their physical location

The Kaizen team then accomplished the following using spaghetti maps, red-blue tag process, brainstorming, risk assessment and 5S checklist tools:

SORT: Segregated necessary items from unnecessary items and eliminate what is not needed

- Reduced total number of items in the corridors by 15% through red-tag process

SET-IN-ORDER: Arranged items so that they can be found quickly by anybody

- Physical locations were determined for 115 items (blue-to-yellow tags)
- Identified / brainstormed 5 infrastructure improvements
- Identified labeling / signage needs for approximately 250 items
- Developed a color coding scheme to match equipment with storage areas

SHINE: Created a spotless workplace

- Identified repair/replacement items throughout the OR

STANDARDIZE: Standardized activities to maintain 5S so the actions are specific and easy to perform.

- Identified safety zones (painted keep-away areas)
- Realign trash removal process
- Reduced environmental service carts (from 8 to 4 carts, including reorganization of the carts)

SUSTAIN: Maintain the gains

- Standard process for monitoring 5S compliance (checklist created including performance board monitoring)

SAFETY: Created and maintained a safe work environment.

- Identify safety shut-offs, fire extinguishers, electrical and arranged the layout to leave these areas unobstructed

Overall, the improved efficiency of this the OR resulted in savings through reduction in walking distance, time looking for items, reduced inventory and improved safety. Savings was not quantified but likely exceeded tens-of-thousands of dollars/year.