

A Lean ED at San Joaquin Community Hospital

By Schola Kabeya MS MBB CPHQ
Director Lean Sigma
San Joaquin Community Hospital

Background

San Joaquin Community Hospital (SJCH) is located in Bakersfield, California. It is a Seventh Day Adventist, faith based, 255 bed acute care nonprofit community hospital. The hospital was created in 1910 by two women who had the vision of providing body, mind and spiritual care.

After 100 years, the hospital's mission of sharing God's love with its community by providing physical, mental and spiritual healing has not changed. It is a nationally accredited cardiovascular and stroke center, state of the art cancer center affiliated with UC Davis, full-treatment burn center and an innovative patient centric outpatient surgery center.

In July 2010, the SJCH executive leadership team decided to adopt LEAN SIX SIGMA as a management strategy to move the organization from good to great.

The hospital initiated a series of Rapid Improvement Workshops (RIW) to organize and redesign the nursing units clean supplies rooms and central and nursing stations.

This initiative was launched in September 2011 with the aim of reducing the time spent by emergency department nurses to obtain supplies and equipment by 70% by November 2011.

The Avariant Reduction Healthcare Body Point of Entry Concept[®] and color coded filing system were selected to be used and the Plan-Do-Check-Act (PDCA) was used as a process improvement methodology.

The team was composed of material management representatives, nurses, the nursing unit secretary, a respiratory therapist, a physical therapist and myself as lean facilitator.

In November 2012 the core team completed redesigning 32 supplies rooms, 10 nursing stations and 3 central stations. The team members were trained in the lean concept and the application of the 7S

(Safety, Security, Sort, Set, Shine, Standardize, Sustain) tool. The result has been a well-organized workplace and 80% reduction in time searching for supplies.

Material management staff is now stocking supplies faster based on newly established par levels. The team was able to create office space by combining supply rooms and removing unnecessary and unwanted items from the work area.

Team members adopted the 7S tool and applied it to their personal lives as well. Ownership and accountability has been established and a year later, all nursing units have sustained the improvement. Everyone involved had the opportunity to learn new skills and long lasting friendships were developed with a shared motto, "You see it, you own it." Time saved has translated into improved job performance. After a successful deployment in the emergency department, a standard roadmap was developed and hospital wide implementation was completed. The results included improved efficiency, productivity,

safety, morale, patient, physician and staff satisfaction. The work accomplished has been recognized by CMS, CDPH, TJC surveyors and consultants as best in class. This project was selected by the National Association of Healthcare Quality (NAHQ) and a poster will be presented at the NAHQ Triple Crown of Quality 2013 Conference.

Plan

The Emergency Department was selected as a pilot area for a test of change of the new process. The Lean Six Sigma -7S innovative tool and Body Point of Entry concept from Avariant Reduction Healthcare® were utilized to address nursing issues related to searching for supplies and clutter, which were visualized throughout the hospital. These issues significantly impacted clinical staff workflow and the quality of care delivered to the patient. A planning team was assembled and trained on the application of the above concepts. The facilitator explained how useful it was to acquire new skills, which one could also use in their own life. Since the team could clearly see and answer the WIIFM (what's in it for me) question, it was easy to secure buy-in from all team members. It was important to take a systematic approach to determine the impact on the clinical staff's time, in order to identify and evaluate the consequences of the unintended issues associated with searching and gathering supplies.

A core team composed of

nurses, material management representatives, a nursing unit secretary, a care partner, a respiratory therapist and a physical therapist were assembled. I provided training and shared examples of before and after pictures of other hospitals that had embarked on similar workplace reorganizations. Safety and Security of the information was crucial and



Supply Room Before Lean Project

the team was frequently reminded of current OSHA and HIPPA regulations. Visual management, color coded labels and stratification management were selected to be applied during the project. A detailed step-by-step implementation plan was developed. The process was divided into 4 activities (sort, set, shine, standardized) and 3 agreements (Safety, Security and sustain) which everyone needed to understand and the expected result was clearly defined and understood by all team members.

Do

The emergency department implementation team was identified and charged to implement the plan

developed by the core team. The team performed Gemba (Japanese for “go see”) and realized we had a system prone with waste. Our supply room utilization was inefficient. There was wasted time going to the opposite ends of the emergency department searching for supplies. We also found there was an excess of supplies used infrequently and inadequate amounts of supplies used frequently. We noted expired supplies and took pictures of the current state of supply rooms.

The implementation team received training in Avariant Reduction Healthcare which included the 7S and Body Point of Entry concepts. New shelves were purchased by material management representatives and mounted on the wall.

The day of the implementation, supplies were pulled off the shelves, sorted and placed on rolling carts. The Stratification Management tool was used to separate supplies and equipment. Unnecessary items and equipment were removed from the rooms to store or were tossed away. The remaining supplies and equipment were set in order and shine-ready to use.

Avariant Reduction Healthcare 7S system and human body point of entry concept® were leveraged and tailored to meet the departments needs. It is a brilliant innovation, which ensured hassle free effort for nurses to find supplies. Successfully changing the supply placement challenged the status quo of, “that

is the way we've always done it." Staff now have a uniform process and common language. A System thinking approach allowed the staff to better understand the supplier/customer relationship to ensure they had what was required to meet the customers' expectations. Patient Centered Care, Customer Satisfaction, Quality, Access and Efficiency were the guiding principles for the reengineering of the supply rooms. The objective was to reduce risk to the patient and save time. The team was able to combine two supply rooms into one and create four physician dictation workstations in the second room. Ownership of the new system was given to the emergency department material handler technician and expectations for use and maintenance were clearly defined. Sustaining the system was every staff member's responsibility and the motto, "You see it, you own it" was applied daily. It has been a year and half since the changes were implemented and the system continues to work well.

The visual management system made it easy to identify missing items. We implemented a "First In, First Out" system and twice a day material management delivery schedule based on emergency department demand. We reduced waste of motion, searching, inventories and defects. Staff morale has increased dramatically. This lean tool is easy, has a low implementation cost and is highly

recommended for a lean deployment to improve productivity, efficiency, safety and the bottom line.

Check

The emergency department material handler technician and I performed audits of the system daily for the first month to ensure sustainability.



Supply Room After Lean Project

The technician continues to follow up with sporadic and quarterly audits. An audit checklist was developed and used during the 7S audit process. We observed staff going into the supply room and being able to find what they needed quickly and return to their work without wasting time.

Act

The executive leadership was very supportive of the improvement and set a goal for the core team to transform all supply rooms, nursing and central stations within the hospital. The core team developed a house wide implementation master plan and by November 2012 had completed standardization of 32

supply rooms, 10 nursing stations and 3 central stations. A poster of this project was submitted to the National Association of Healthcare Quality and was selected to be presented at their 2013 yearly conference.

Lessons Learned

1. It is important to align mission with people and process.
2. A successful lean journey should start with workplace organization using 7S.
3. Build relationships based on trust and ensure everyone can answer the question "what's in it for me (WIIFM)."
4. Include all stakeholders to the process or system you are trying to change. In our case besides emergency department nurses, we also had an emergency department technician, a material handler, the material management department, and representatives from the respiratory therapy and physical therapy departments.
5. Spend plenty of time in the planning phase to avoid any delay in the "do" phase of PDCA. For example if you have to buy shelving take into account the lead time it takes to arrive and install.

Schola Kabeya, MS, MBB, CPHQ can be reached at scholam@hotmail.com.