

ER Team Enhances Patient and Staff Experience Through Improved Registration, Triage, and Unit Set-up

Outcomes

- Increased patient satisfaction scores
- Estimated 25% reduction in excess motion (2,000 hours diverted annually to patient care)
- Up to 50% reduction in patient wait time to care in non-peak hours and 80% during peak hours (Decreased patient length of stay)
- Minimized confusion at registration with new registration layout

The ER staff at a mountain states hospital was experiencing difficulty delivering services in a way that achieved the desired degree of patient satisfaction. Patients had recently scored the overall ER experience in the 18th percentile nationally. With patient expectations of service rising almost daily, a fundamental change in business processes was needed in order to reduce wait times and provide world class service.

To improve the ER patient experience at the facility, a Kaizen team was tasked with examining the sources of delay for triage and bed/nurse assignment, confusion in registration, and analysis of nursing efforts.

Using value stream mapping, issues were identified with:

- Existing registration, triage, and bed/nurse assignment processes
- Equipment and supply room organization and layout

These affected all aspects of the patient experience from the lead time to receive care to the flow of work once the nursing staff has commenced with patient care management. The team chose to focus primarily on issues related to up-front patient flow and wait times in addition to workplace organization.

Registration Efficiency and Clarity

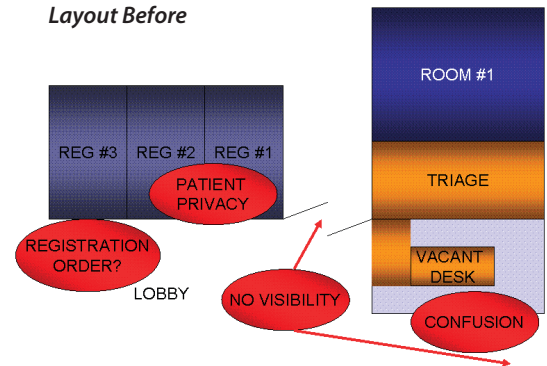
With regards to registration, the team deemed the current process and layout to be inefficient and confusing to patients:

- The registrars lacked visibility to incoming patients as well as the ER entrance
- The patients' privacy was often limited
- There was little consistency in registration order.

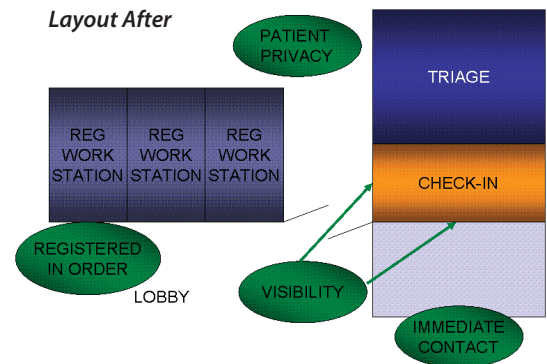
The team defined a new registration layout with the goal of streamlining the registration and discharge processes. The new registration layout would allow the staff to ensure patient privacy

and visibility as well as immediate contact to incoming patients thus serving to minimize patient confusion and allow registration to effectively manage the waiting room. Minor layout modifications were required:

Layout Before



Layout After



Improvements were made to enhance registration's efficiency. In the current state, the registrars had to walk back-and-forth from a patient room to the front desk to complete registration and discharge. The team carried out a beneficial improvement by simply establishing access to the STAR software on each patient room computer.

Through this, the team was able to eliminate excessive and wasteful motion saving the registrars a minimum of five minutes per patient.

Improved Up-Front Patient Flow, Focusing on the Triage Process

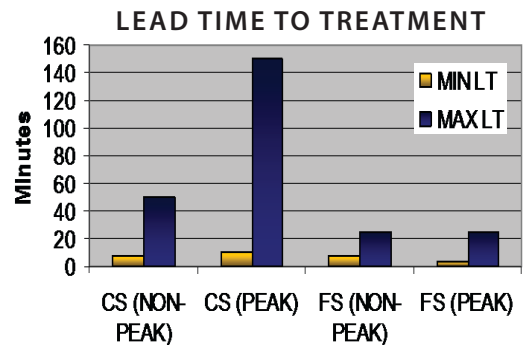
Observations concluded that the current triage process was inconsistent and was a source of extended wait times. Time reports indicated that it took an average of 32 minutes for care to begin.

The team was tasked with improving wait times to care, with the ultimate goal of triage process improvements. Current state analysis led the team to the conclusion that utilizing a designated triage room during non-peak hour was inefficient given there were rooms available. The team implemented a bedside triage strategy where the patient would be brought back to the available room immediately where the nurse could begin their assessment within just a few minutes after registration. Expectations are that lead times to care would be reduced by as much as 50%.

During peak hours, the team established a process in which a Nurse Practitioner would be utilized to carry-out the triage process, in addition to

The team achieved up to a 50% reduction in patient wait time to care in non-peak hours and 80% during peak hours, leading to a decreased length of stay.

serving as a means to medically screen out non-emergent patients (current M.S.O. percentage was under 1%). The goals were three-fold: 1) Begin care within 2-5 minutes from arrival, 2) Reduce wait time and travel for MSO patients, and 3) Begin care on waiting patients. With this future state, lead time to care during peak hours was decreased by as much as ~80%. The graph below indicates an estimate of maximum and minimum lead times to care for both the current state and future state.



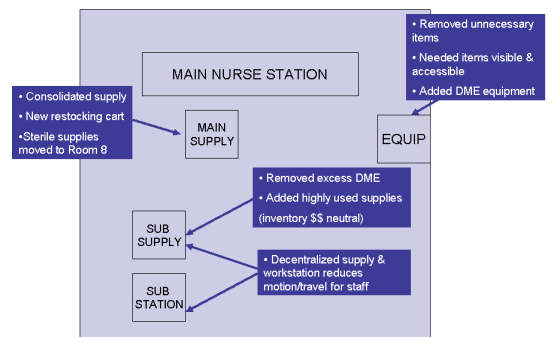
Workplace Organization Efforts

Finally, the team began using 5S principles to improve the overall ED's organization in support of more-timely responses and less time-consuming motion. In order to eliminate the observed waste searching in central supply locations for common items, the team took on the task of organizing two main supply rooms and two equipment rooms. The staff grouped supplies as they are used to help reduce searching for needed supplies.

To minimize wasteful motion and time spent searching for supplies in the central supply room, the team developed a strategy to decentralize the supplies and establish a "sub-supply room" in an available room at the opposite end of the department. This initiative will allow for a 25% reduction in excess motion, diverting up to 2,000 hours to direct patient care activities. A diagram of the supply and equipment room organizational strategy is shown at right.

The team also standardized all point-of-use supplies. In doing so, a new supply cart was established to facilitate easier supply maintenance. In the current state, the staff would overload a cart with supplies (bottom, left) with no apparent

consistency in which supplies were gathered. The revised supply cart (bottom, right) ensured all room supplies were being restocked with the same supplies. Additionally, all drawers and cabinets have been labeled with the correct par level.



Supply Cart Before



Supply Cart After