

Innovations: Team Assessment Pull Process

Not too many people will automatically make a connection between manufacturing automobiles and providing health care but they do have something in common: a value stream. For auto manufacturers, this involves all activities related to transforming raw materials into a finished product and delivering it to the customer, and in healthcare it concerns all activities related to providing care to a patient. As a result, it is not surprising that Children's Healthcare of Atlanta was able to use a process improvement strategy from the auto industry to improve efficiency in one of its emergency departments.

Using Lean, a rapid process improvement philosophy derived from the Toyota Production System, the Children's Healthcare of Atlanta, Scottish Rite campus implemented a technique it named the Team Assessment Pull Process (TAPP).

Emergency department (ED) staff chose the word "pull" because it captures the crux of the methodology: they take on work when they're ready for it, rather than having it pushed on them. Using TAPP, Scottish Rite was able to reduce the overall median length of stay (LOS) in the ED from 153 minutes to 125 minutes. Excluding fast track patients the median LOS in the ED decreased from 192 minutes to 167 minutes. TAPP has also allowed Scottish Rite's ED to reduce median door-to-provider time from 44 minutes to 28 minutes.

Choosing Lean

In 2007, Scottish Rite's ED was grappling with how to accommodate an increasing patient volume given space and resource constraints. They quickly discovered adding more space was not the answer.

"We pursued the traditional approach to reducing ED length of stay by increasing our ED capacity," notes Marianne Hatfield, system director of emergency services for Children's. "We underwent an ED expansion that increased our capacity from 38 beds to 54 beds, but after the first year in our new facility, our ED LOS had actually increased, not decreased. Lean was attractive, she says, because it requires a brief but intense time commitment — up to one week of consecutive full-day meetings — followed by rapid process implementation trials after the week of process re-design." "Lean also

places heavy emphasis on frontline staff involvement in process improvement, which appealed to us. We knew that the frontline staff would be experts in the in their current process,” she says.

After visiting Seattle in January, 2008 to observe how another hospital implemented Lean, Scottish Rite established a Lean team, comprised of frontline staff — nurses, physicians, and ED technicians — who undertook the process review and re-design work. By mapping their processes, they were able to identify variation and waste. Waste was defined as any activity that was not seen as value-added by a customer. In the ED, this included redundant processes and re-work; searching for supplies needed for patient care; deciding which patient to see first when there are multiple sets of orders; interruptions in care; making a patient travel for a procedure; and any delays for any reason.

Team Assessment Pull Process

The team decided to focus on redesigning the flow for a segment of the ED visit with the most variation and waste. That one part, says Hatfield, was the initial nurse and physician assessment.

“Staff and physicians recognized there was a great deal of variation and waste in their assessment processes and particularly in terms of clinician coordination,” Hatfield says.

“A patient could see a physician, nurse or technician in any order, and depending on whom the patient saw first, they could be in a room for an extended period of time without any treatment starting. Nurses assigned to more than one patient simultaneously would have to decide which set of physician orders to initiate first. Physicians were often frustrated because the orders were not completed in a timely manner.” The waiting and delayed decision making equaled wasted time for patients, nurses and physicians.

TAPP presented “the most value-added process for the patient,” says Hatfield. Under this system, the patient is seen by the physician and nurse immediately after being placed in a room. The nurse completes the treatment plan ordered for the patient before being assigned to the next patient.

“Patients are no longer put in rooms simply because one is available,” says Hatfield. “They are now ‘pulled’ to a room only when a physician and nurse are both ready to start their treatment plan.” TAPP has not only improved communication between physicians and nurses, it has improved the communication for the patient and their family members. “The patient and his or her family are not asked redundant questions because the physician and the nurse complete the assessment together,” Hatfield notes. “The patient and family are able to hear the physician and nurses verbalize the plan of care.”

The 5 S’s

In order to further expend the benefits of TAPP the ED adopted the 5S system, which involves:

- Sort: Remove from workplace all items that are not needed for current operations and activities.
- Set In Order: Arrange items needed so they are easy to use, and label them so they are easy to find and store.
- Shine: Keep the workplace tidy, sweep floors, clean equipment, and generally make sure everything stays clean.
- Standardize: Adopt a method of working to ensure the first three pillars are maintained.
- Sustain: Ensure and make it a habit that everyone adopts and carries out correct procedures.

“We used 5S to standardize the supplies in our patient treatment rooms, both in the cabinets and at the head of the bed,” says Hatfield. “Staff members and physicians provided input into what they needed the most when treating patients and we organized supplies to be accessible and useful. There are visual cues, such as lines and labels that indicate the par level and when a supply needs to be restocked.”

Clinician Involvement Leads to Clinician Buy-In

“Lean is completely customer-focused, and we have seen an increase in our overall customer satisfaction scores as a result,” Hatfield says, adding that the Press Ganey scores for the ED have been in the 99th percentile ranking for “overall rating of care” for seven out of eight consecutive quarters.

“Process change is not easy,” Hatfield says. “People are naturally resistant to change because they have become adept at doing their work in a certain way and often fear they will not be as successful if they have to change their practice or process. The process change implementation was not initially embraced by all of the staff and physicians, and there was a period of resistance that required focused communication, re-education and commitment on the part of the Lean team. We were successful, because we had physician support and several physicians on our Lean Rapid Process Improvement Workshop (RPIW) team. Our partners in our physician group understood the patient is there to see them, and they wanted to improve the visit and decrease the LOS for the patient.”

A take-away lesson, says Hatfield, is the importance of senior leadership of the hospital campus to serve as a supportive sounding board without participating directly in the RPIW.

“As the Director of ED operations, I sat in on the RPIW, but I did not have a voting voice in any of the decisions the team made,” she says. “My role was to help them to procure any needed supplies, resources or staffing changes that might need to occur based on their process change recommendations. While it was initially difficult for me to remain passive and not make recommendations, I soon became enthralled with the ideas and recommendations provided by the participating frontline staff and physicians, and I am still amazed at the major process change that they have successfully implemented.”

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