

HOSPITAL CHARACTERISTICS

BARNES-JEWISH HOSPITAL

- ▶ St. Louis, MO
- ▶ 1,074 Beds
- ▶ www.barnesjewish.org

Barnes-Jewish Hospital at Washington University Medical Center serves as the largest hospital in Missouri. The hospital consists of 1,800 staff members and is known for its nursing care being certified as a “Magnet Hospital.”

S.T.E.E.E.P.



TIMELY

LOS was decreased and patients were released earlier.



EFFICIENT

Patients received appropriate care in a timely manner.



EFFECTIVE

All staff members actively participated and continue to sustain the work.

A CHALLENGE PRESENTS AN OPPORTUNITY

The Problem

The women and infants department’s lean journey began in early 2006 when a local hospital suspended its obstetrical services, leaving Barnes-Jewish as the only hospital within city limits to deliver babies. This resulted in a 14 percent increase in patient admissions, a 16

percent increase in deliveries, as well as a 21 percent increase in patients presenting to the pregnancy assessment center (PAC), bringing the 2006 number of visits to 9,500. This also caused unnecessary transfers of care, patient movement within departments and extended wait times. The women and infants department experienced nine reviewable adverse events (causing harm or serious risk) in less than one year.

The Solution

By applying lean/Six Sigma methodologies, the team was able to improve the patient experience and prevent patient bottlenecks. These methodologies included 5S: sort, straighten, shine, standardize, sustain and safety.

In the PAC, decisions were traditionally based on individual knowledge and experience versus standardized methods to determine acuity, perform triage assessment or determine when to escalate care. A standardized acuity scale is now used to determine the needs of each patient and the resources available, resulting in care that is more tailored to the individual patient.

The patient’s traveling distance was also cut by moving the assessment center, delivery room, special care and nursery department to the same floor. The distance between waiting room and assessment center was also decreased.

The discharge process implemented a visual discharge board, standard patient care worksheet, patient education and a standard discharge timing process for mom and baby.

Results

Between 2005-2006, Women and Infants accounted for 10% of the total hospital admissions and 28 percent of the reviewable events. This was decreased to 5 percent of reviewable events in 2008-2009. The dramatic change in reviewable events was attributable, in large part, to the implementation of the PAC acuity scale and standard work. The length of stay in PAC for high acuity patients was reduced from a mean of 154 minutes in October 2006 to a mean of 21 minutes in 2008: an 86 percent decrease. Further, the PAC interventions reduced the number of patients sent to the waiting room from 18% in 2006 to less than 4% in 2008. Prior to the discharge process improvement, 0 percent of patients were discharged by 11 a.m. In 2008, after the improvement, 27 percent of patients are discharged by 11 a.m., and 87 percent are discharged by 1 p.m.

Background

In 2005, senior executives at Barnes-Jewish Hospital realized there was room for improvement in the hospital’s pursuit of excellence. When considering what methodology to move forward with, the executive committee wanted to ensure that everyone,

TEAM MEMBERS

Cindy Barkman, RN

Lead Charge Nurse

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Staff Nurse

Coreen Vlodarchyk

Executive Sponsor, Chief Nurse

Executive

Laurie Wolf

Operational Excellence Leader

from the senior staff to the frontline staff would be heavily involved in the process from the start.

“A lot of changes were needed in terms of removing waste,” performance improvement engineer Pat Matt, RN, says. “We wanted to heavily involve the frontline staff to create improvement and recognize the changes needed. We chose the lean Six Sigma management system, because it really allows for continuous improvement and requires learning by doing.”

While looking for areas of improvement, a neighboring hospital shut down its obstetrical services, resulting in Barnes-Jewish being the only hospital in the St. Louis metro area that could deliver babies.

“We saw a pretty significant increase in volumes of woman and infants,” Matt says. “As a result we experienced some events and had several issues with patient flow. It was a challenge to say the least.”

With more than 4,000 deliveries and 9,000 patients moving through the PAC, Barnes-Jewish knew they needed to improve its pregnant patient flow process in order to achieve optimal efficiency and improve on the patient’s safety.

An opportunity presented itself to participate in a value stream mapping project, a lean technique, through the American Society for Quality. Before Barnes-Jewish jumped into the project, the hospital wanted to identify as much as possible on the front end in order to limit obstacles and improve the overall knowledge of the staff, according to Donna Hecke, RN, performance improvement engineer at Barnes-Jewish.

“We were very young in terms of value streams, throughout the organization,” Hecke says. “In terms of preparing this process, that did create a challenge. The visual management, the counting of foot steps was foreign to a lot of people. We wanted to make sure we weren’t moving people faster just to move them faster.”

Several issues needed to be addressed including patient discharge process, patient flow and unsafe adverse events. Therefore, several solutions were needed, including an acuity scale, set cycle time goals in the PAC, improved patient throughput process that included 5S, visual discharge boards, a standard discharge timing process for mother and infant and patient education.

“One of the biggest hurdles was to get everyone on the same page and get patients ready for delivery in a timely fashion,” Matt says. “It required everyone working together to address the needs in the most urgent cases.” she adds, “ We had to get in the mind set that everything needed to be done in the best interest of the patient.”

**Principles of
Performance
Excellence**

Creation of High-Reliability Culture

Barnes-Jewish focused on continued staff involvement throughout the process to ensure best care for the mothers and babies.

“One of the ways we kept everyone involved was to make everyone feel like they were part of the team,” Matt says. “Whether they are frontline staff, directors or managers, we required everyone to attend daily briefings where we took sug-

gestions and ideas and even trialed some of those experiments.” Directors and the chief nursing executive routinely sat in on events and lunch meetings where presentations were given and feedback was received

Barnes-Jewish also used performance boards highlighting unit goals. When a department failed to meet its goal, the unite needed to explain what happened and give solutions to remove the barrier.

“That was a big piece to creating a culture of responsibility,” Matt says. “When we first started out reasons like physicians waiting on tests was a common excuse but we got to a point where we were able to drill them down and provide detailed explanation and strategies for achieving goals.”

Additionally successes were celebrated. Barnes-Jewish was chosen as one of 27 finalists to present its case study at the American Society for Quality conference. Their team won second place for their poster submission and finished first for the best safety project.

Removing Waste

By using lean/Six Sigma strategies, Barnes-Jewish was able to eliminate extra steps throughout the women and infants department. By decreasing the distance between the PAC and waiting room from 270 feet to 60 and moving all of the department resources to the same floor, patient flow was improved. Length of stay was also improved, with 40 percent of patient being discharged by 11 a.m. and 86 percent by 1 p.m

Continual Improvement

The hospital is constantly looking for ways to improve its women and infants department. “We are by no means finished with our value stream, we will continue on to our third and fourth streams and constantly reevaluate or process,” Hecke says. “Our physicians and champions are involved every step of the way and are always looking for areas of improvement.”

That includes multiple improvements to the triage criteria and constantly holding events to create awareness about the work that is being done. Barnes-Jewish has held 28 events since it started this project back in 2006. “The beauty of events is it brings in all players,” Matt says. “It brings in the frontline workers, directors and people from all areas. One area really impacts another. That is really where the, a-ha moments come from.”