

Lean Wait Times

St. Joseph Regional Health Center Bryan, Texas 238 beds

St. Joseph Regional Health Center is the anchor facility for St. Joseph Health System, a member of Sylvania Franciscan Health, which is the health and human services ministry of the Sisters of St. Francis of Sylvania, Ohio.

With a mission to provide excellent health care and promote wellness throughout the community, the organization began working with management consulting firm [Simpler Consulting](#) in 2011 to implement Lean management to help improve quality and efficiency.

Lean management describes a set management techniques and principles that drive continuous improvement based upon customer driven value. Lean thinking health care organizations are patient-centric organizations that empower front-line staff to define value in the eyes of their patients (not clinicians) and seek to identify and eliminate wasteful work elements from every aspect of their enterprise—both clinical and non-clinical.

SJRHC Goes Lean to Improve Quality and Efficiency

The leadership team began identifying the key value streams. In health care, value streams may be departments (radiation oncology, catheterization lab, etc.), care lines (diabetes or cancer care) or processes (revenue cycle). During the value-stream analysis, the leadership team mapped out key steps and interactions a patient has when receiving care in departments across the hospital. One example of a value stream is the interactions a patient experiences in the emergency department. The value-stream analysis determines each step the patient takes from admittance to discharge.

SJRHC identified four value streams to begin the Lean transformation—the emergency, perioperative services, revenue cycle and pharmacy departments. Once the value streams were identified, the team went to work performing a series of rapid improvement events to identify waste. In a rapid improvement event, the coach leads executives, clinicians and front-line workers in an intensive forum where new ideas to eliminate waste are trialed and put in place.

SJRHC saved \$883,821.80 and has experienced improvements across each value stream.

Emergency Department: Reducing Wait Times and Improving Patient Care

Problem: For patients arriving at the SJRHC Emergency Department, the wait times were often significantly above benchmarks/national averages. Patient dissatisfaction was a significant issue with patients leaving to receive care elsewhere. For patients who are admitted, the wait time for an inpatient bed was also significant.

Solution: SJRHC developed a team of physicians, nurses and staff to participate in a rapid improvement event to improve patient flow and reduce wait times. This was a five-day forum where the team identifies unnecessary steps in the process (waste) and puts in place new ideas to eliminate waste. The team identified several areas that were attributing to the long wait times:

- Delays in patient transfers
- Time spent at triage and registration

To address the delays in patient transfers, the team created a new process to coordinate the assignment of patient rooms. In this process, patient rooms would only be made available when a patient is ready to be transferred. As a result, the receiving and sending units accountable were responsible for any delays.

To reduce time spent at triage and registration, the team then created the “First Look” initiative to get the patient to a nurse or physician sooner. Upon seeing a patient, the nurse assesses the need for rapid intervention in case the patient has a serious medical condition. The triage area was modified to allow capacity for additional people, thus making the process faster by concurrently evaluating the patient and avoiding delays between triage and registration.

Results: Since the emergency department implemented “First Look,” triage times decreased by half and left without being seen rates were reduced. This not only resulted in better care, but it also resulted in financial benefit. SJRHC captured more than \$160,000 in revenues in the first year. For those patients requiring admission to the hospital, the placement time for a bed on all inpatient units decreased by as much as 73 percent.

Perioperative Services: Cleaning Up Sterile Processing

Problem: While clinicians are often seen as the leaders in ensuring safety and quality in surgical care, the sterile processing staff also plays a critical role in ensuring on-time surgeries and protecting patients from surgical site infections. Before implementing Lean management, the peri-operative services’ sterile processing area was not well organized, causing delays while searching for equipment and inventory. As a result, cases were often late with start times. Surgery cancellations were also an issue for the department.

Solution: SJRHC conducted a rapid improvement event, where the team created a production board to document time saved and implemented a pull system. Pull systems, often used in manufacturing, controls the amount of inventory and helps to ensure that tools are sterilized and available when the nurses need it. It results in better inventory control, improved process and reduced lead times. The team set up pull systems at all workstations to create an assembly line, ensuring case carts and instrument sets are available and stocked appropriately based on case demand.

Staff also changed processes to avoid last-minute surgery cancellations by providing the necessary pre-warning calls to patients to ensure they were coming. They restructured the service to ensure scheduled surgeries took place on the designated day. For example, if a surgery had to be rescheduled for a certain reason, the hospital could still capture the revenue by rescheduling a different surgery during that time.

Results: Since implementing the pull system, the department reduced the lead time for materials and improved staff satisfaction. By having a clear understanding of the forecast for the next day’s surgeries, staff was able to prepare necessary instruments in a timely fashion so that instruments were being organized on an as-needed basis as they were used, which resulted in a large amount of time savings and an average cost savings of \$990 per instrument set. Furthermore, the department saw savings of \$622,015 by avoiding surgery cancellations.

Revenue Cycle: Improving Logistics to Capture Revenue in the Cath Lab

Problem: The cath lab at SJRHC experienced payer denials totaling more than \$178,000 due to incorrect patient status. Additionally, to help recover these denials, staff was spending five hours per week in review of charts.

Solution: SJRHC utilized Lean management techniques to change their process to work with case management at an early stage to help ensure valid claims.

Results:

- Increased reimbursement
- Eliminated drug-eluding stent denials
- Significantly reduced the time staff was taking to process and recover the denials

Pharmacy: Reducing Medication Errors and Turnaround Time

Problem: At SJRHC, the pharmacy department is one of the busiest departments in the hospital, providing life-saving medications to patients. With phones constantly ringing with medication questions and requests, the department experienced lengthy turnaround times.

Solution: During rapid improvement event, SJRHC found that nurses were not using the pharmacy department's Meditech software and the workflow of the pharmacy department could be improved. As a result, staff trained nurses in all units on how to effectively use the pharmacy's software to check on order statuses and to send messages without having to place a telephone call to the pharmacy. Pharmacists were isolated in separate rooms without phones to reduce distracting phone calls as they transcribed orders. Additionally, SJRHC worked to redesign workspace to improve accessibility and flow of medications from the pharmacy to the patient's bedside.

Results: Since the pharmacy department began implementing Lean:

- Telephone calls to the department have reduced by more than 90 percent
- Pharmacy-related medication errors have decreased by half, with turnaround times for medication at 60 minutes or less.