



Solving complex issues with high potential

THE ORGANIZATION

The not-for-profit Huntington Hospital was founded in 1892 in Pasadena, CA. Today, Huntington has 636 beds, 900 staff physicians and more than 3,000 employees, and provides the only trauma center and only neonatal intensive care unit in the region. The hospital also is renowned for its programs in cancer care, neurosciences and cardiovascular services.

RESULTS

- Within six months of implementing the new processes, CCU bed identification cycle time decreased from four hours to 40 minutes on average—an 84% reduction.
- Within six months, the hospital reduced implant supply costs by \$1.8 million, with an annualized projection of \$3 million in savings.

Advancing in Lean Six Sigma skills and tools can drive significant organizational improvements

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Huntington recently undertook two major performance improvement projects aligned to its strategic initiatives of improving service excellence, strengthening physician relationships, and achieving organizational growth:

- **Free up Critical Care Unit (CCU) capacity** by ensuring patients in the nursing unit met the criteria for care, and efficiently managing and transferring those who did not. With improved patient management in the CCU, hold times in the Post Anesthesia Care Unit (PACU) and emergency department (ED) would be reduced, improving overall access to care.
- **Stem financial losses in the spine sub-service line** through cost reductions to maintain a viable program to serve the community.

The projects required root-cause analysis of complex processes, improvement strategies that impacted multiple clinicians and staff members, and acceptance from all stakeholders. For these reasons, the Performance Improvement team at Huntington used the Lean Six Sigma (LSS) framework to guide its approach.



Huntington has been working with GE Healthcare Performance Solutions since 2006 to adopt the LSS methodology and meld it into its business operations. To help Huntington achieve maximum ROI impact and culture change from the two projects, additional GE master black belt and master change agent coaching and mentoring was provided to help the Huntington LSS black belts take their skills to the next level.

LSS methodologies, along with change management facilitation (Change Acceleration Process™ [CAP] and Work-Out), gave the Huntington project improvement team the tools required to map processes, to identify key trends and problems, to develop effective solutions, to coach employees to accept and adapt to new ways of working, to measure results, and to sustain improvement.

IMPROVING CCU THROUGHPUT

Challenge: The hospital wanted to improve access to capacity hospitalwide. Getting the right patient in the right bed at the right time was a priority.

Insight: LSS cause-effect analysis revealed that high CCU ALOS was a key problem. In fact, the team traced more than 120 factors in CCU processes that directly impacted access to capacity hospitalwide. CCU patient transfers and discharges were very slow: The average bed identification cycle time was four hours and the average discharge cycle time was 13 hours. These bottlenecks were leading to long PACU and ED holds as patients waited for CCU beds to become available. As a result, the hospital's ability to provide quality patient care, accommodate community demand, and meet elective surgery needs was being compromised.

Solution: The team developed a new patient transfer process built around data-driven demand forecasting, a visual patient management system, and operational accountability. Key process changes were to:

- Identify clear patient care needs assessment criteria for each unit and patient status.
- Manage patients by having the patient flow coordinator collaborate with the patient's assigned RN.
- Implement an electronic census-activity worksheet to track patient status, movement and cycle time.

Results: **Within six months of implementing the new processes, CCU bed identification cycle time decreased from four hours to 40 minutes on average—an 84% reduction.** The patient discharge process was accelerated by three-plus hours. The annual cost savings from more effective patient flow is projected to be \$1.3 million.

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Dr. Paula Verrette

Vice president, Quality and Performance Improvement
Huntington Hospital
Pasadena, CA

REDUCING SERVICE LINE LOSSES

Challenge: Huntington's highly regarded spine sub-service line was not profitable in 2007, with six DRGs accounting for more than 80% of the net losses. The hospital set a goal to break even, at minimum, while maintaining the high quality of care.

Insight: Through LSS analysis, the team determined that implant supplies represented the largest opportunity for cost reduction, accounting for 59% of the cost per case—compared with 9% length of stay (LOS), 10% operating room (OR) time, and 22% drugs, CCU, and other factors. Potential savings in the annual cost of cervical screws alone was \$133,000, when VHA benchmark data was compared with average vendor costs. In total, the eight implant supply categories represented a cost reduction opportunity of \$2 million. "A key learning was that implant pricing was not being monitored due to the large volume of OR products and the limited time available to identify critical cost drivers," says Javier Cuevas, PI black belt.

Solution: The Huntington team worked with the spine surgeons to gain approval to use benchmark pricing as a goal and then developed an RFP process for vendors. "It was the first time at the hospital that trend data was used in conjunction with a coordinated effort among all major stakeholder groups—surgeons, management, purchasing, and quality support—to achieve a cost reduction goal," says Dr. Paula Verrette, vice president, quality and performance improvement.

Results: **Within six months, the hospital reduced implant supply costs by \$1.8 million, with an annualized projection of \$3 million in savings.** The number of vendors was reduced and negotiated prices to well within VHA best benchmarks. "The project showed us we could reduce implant costs without impacting the quality of care," says Elizabeth Mullikin, executive director, Neuroscience Service Line. "It also had the benefit of strengthening the relationships between the surgical specialists and the hospital."

In addition to achieving positive results, the Huntington team gained a number of insights that will inform future projects, says Dr. Verrette. Active participation and buy-in from the physician stakeholders—achieved using the CAP tools—was a major factor in the success. Also, the team identified multiple LSS tools that could help in rapidly scoping additional opportunities for savings within the supply chain.

For more information, email gehealthcaresolutions@ge.com or visit performancesolutions.gehealthcare.com/strategy-leadership.

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Our “healthymagination” vision for the future invites the world to join us on our journey as we continuously develop innovations focused on reducing costs, increasing access and improving quality around the world. Headquartered in the United Kingdom, GE Healthcare is a unit of General Electric Company (NYSE: GE). Worldwide, GE Healthcare employees are committed to serving healthcare professionals and their patients in more than 100 countries. For more information about GE Healthcare, visit our website at www.gehealthcare.com.



imagination at work