

# St. Luke's Episcopal Hospital Addresses the Challenges of CMS's Core Measures

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### About Our Client:

- An acute-care teaching hospital
- The primary adult teaching hospital for Baylor College of Medicine
- 627 beds
- 624 medical staff
- Nearly 4,000 employees
- Annual revenues total \$1.5 billion



### Client Challenge

For nearly two years St. Luke's Episcopal Hospital (SLEH) of Houston has been successfully upgrading its processes in department after department—in order to achieve greater efficiency, efficacy, safety and employee engagement. Teams comprising SLEH managers and employees, and consultants from RWD Technologies, continue to make great strides by applying the toolkit of Lean improvement.

One of SLEH's most important transformational projects, however, cuts across many departments. SLEH aims to earn a spot at or close to the top of national performers in the Centers for Medicare and Medicaid Services' (CMS) Core Measures standards. This standard of care will be provided to *all* its patients. SLEH selected RWD to help with this huge project, as well.

Beginning in 2008 Medicare will incentivize healthcare facilities based on their Core Measures performances. The first set of Core Measures pertains to surgical care improvement (SCIP), acute myocardial infarction (AMI), congestive heart failure (CHF), and community-acquired pneumonia (CAP).



“We had been struggling with the Core Measure performance,” said Dr. David Pate, SLEH’s CEO. “Our traditional methods that we had used had not gotten us to the levels that I thought would reflect a reliable process. So I decided that we are now going to apply Lean to the Core Measures.”

### Four Cross-functional Teams Tackle Core Measures

SLEH is part of the St. Luke’s Episcopal Health System. It’s an acute-care teaching hospital in the Texas Medical Center and the primary adult teaching hospital for Baylor College of Medicine. It has 627 beds in service, a medical staff of 624, and nearly four thousand employees. Its annual revenues total \$1.5 billion.

In August 2007, RWD consultants began assessing the “Current State” of processes related to Core Measures and developed targets for a “Future State.” Next, an SLEH steering committee and an executive team were created that would supervise the campaign. Members of four cross-functional teams were selected—each addressing a category of Core Measures. They received Lean training from RWD. Schedules were developed, and weekly and bi-weekly meetings set up to provide updates and share information. Throughout the effort, RWD experts worked closely with the SLEH teams.

“At that point in time,” said RWD project leader Todd Hensley, “each team took an issue and started developing countermeasures that address the root causes. It took us about a month on our problem-solving activities and then we started our full implementation.”

Because CMS publication of SLEH’s performance measures wouldn’t come for six to nine weeks after they were achieved, RWD and the SLEH teams couldn’t be sure of how they were doing—operating blind, in effect. “So we developed our own in-house metrics,” said Hensley.

### AMI Core Measures

For AMI, CMS specifies that Medicare/Medicaid patients who arrive at St. Luke’s with heart attacks (or are found coincidentally to have had them) receive specific treatments and counseling, such as:

- Aspirin at arrival and discharge
- Beta blocker at arrival and discharge
- Pharma or mechanical thrombolytic agent within 30 minutes of arrival
- Percutaneous coronary intervention (PCI) within 90 minutes of arrival

## Healthcare

Derrick Johnson is Manager of Cardiac Cath Lab Operations at SLEH and leads the AMI team. One of the first things they realized was the need for greater speed confirming patients' heart attacks. Twenty to 35 minutes were being routinely wasted. That insight led to several key solutions.

"When these patients come in with chest pains," Johnson said, "one of the first things we do now is a 12-lead electrocardiogram. They get aspirin immediately. From the time the patient gets [to the ED] to the time the patient has an EKG and it's shown to the [cardiologist], it should be ten minutes. If the doctor decides to treat them with thrombolytic, they can start that. From the time [of arrival] to the time they notify the cath lab should be 15 minutes. We give [ED staff] a timeline so they know what their goals are. That way there's no delay."

These and other improvements assure that Core Measures requirements are met. In addition, Johnson and the AMI team set up electronic record-keeping systems to create the solid documentation that CMS requires. All told, AMI Core Measures rose to 97 percent, a 25 percent improvement.

### CHF, SCIP and CAP

Nurse Manager Valerie Arkadie leads the CHF team. For the Discharge Instruction Core Measure, they found some heart failure patients went home without receiving heart failure education. Others who had received the education did not have signed documentation in their charts. For the Left Ventricular Function (LVF) Measure, existing information in the physicians' records didn't get into hospital records—where it can be properly documented.

For Discharge Instruction, said Arkadie, "we had to come up with a process to address the heart failure patient wherever they may be in the hospital, whatever their diagnosis may be. So we had to make these discharge instructions universal. [For LVF] what we're doing until we get electronic systems in place is reminding doctors, nurses and everyone to look through charts for the LVF assessments. If it's not present we have to call [physicians' offices]. We're doing a lot of follow-up to ensure that the information is in the patient record. And [the ACE Inhibitors measure] is tied to the LVF assessment. For Smoking Cessation, we had a standardized process in place."

Arkadie and her team lifted overall CHF Core Measures to 84 percent, an increase of 28 percent.

Lisa Burke, Director of SLEH's Main ORs, heads the SCIP team. Their number one issue was meeting the 60-minute Prophylactic Antibiotic Measure. "The main challenge with giving antibiotic within 60 minutes of incision time," Burke said, "is that we never know exactly when the incision

is going to occur. So we changed our process to giving the antibiotic when the OR is calling for the patient." For the Antibiotic Measure, the SCIP team has gotten compliance close to 100 percent; on all SCIP measures they've hit 69 percent, a 12 percent increase.

For its part, the CAP team started at 54 percent Core Measures compliance requirements for control of community-acquired pneumonia and raised it to 85 percent.

Dorothy Kite-Powell—SLEH's director for the Center for Advanced Clinical Practice—led the CAP team, which comprised about a dozen individuals from various specialties. "For example, we had an issue with antibiotic timing," she said. "We weren't meeting the four-hour window. That was because of not identifying some patients in the emergency room [who had pneumonia]. To deal with that we developed a triage form, so that [ED personnel] triaged all patients with certain symptoms immediately. We were at 80 to 83 percent [compliance] at the beginning. For the last four months we've been 100 percent."

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Dr. David Pate  
CEO, SLEH

The CAP Lean team found that the measure requiring a blood culture before antibiotic treatment was also an issue. Why? Because they discovered that specimen labeling wasn’t being handled properly. “We found that people weren’t using the correct stickers,” said Lean team member Eloise Catrett, an Advanced Clinical Nurse. “They weren’t being put on right, which caused problems in the lab. They were having to re-label lab specimens [in the lab].” With the help of the CAP team, the labeling procedures were fixed and Core Measure blood culture performance was greatly improved (74% VS. 100%).

Overall, the CAP team started at 54% Core Measures compliance. They have since raised it to about 80% this month.

### **“Much Better Results”**

As SLEH keeps raising its Core Measures ratings, it can expect several benefits, including:

- Increasing SLEH’s standing in the CMS public record
- Obtaining bonus payout for being in the top 20 or 10 percent nationally
- Competing more effectively for patients
- Obtaining national recognition for being an elite patient-care facility
- Reducing waste and improving staff retention

“I’ve been very pleased [with Core Measures],” concluded Dr. Pate. “Since we’ve applied Lean to it, we are getting much better results. We have better measurements of our performance internally. We have more effective problem-solving. We built quality into the processes so that they’re more efficient and more reliable. “

“It’s extremely important to me that the improvements we make are sustainable. So I think the rigor with which we’ve applied the Lean process—which has only been possible by having outside help and having a highly skilled group like RWD—has helped us to be more successful now and more successful in the future.”