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MISSOURI TEAM QUALITY AWARD RECIPIENT

LEAN LABORATORY TEAM at
St. Anthony's Medical Center, St. Louis

St. Anthony's Medical Center
ADVANCED MEDICINE. COMPASSIONATE CARE.

PROFILE

St. Anthony's Medical Center is a 767-bed comprehensive healthcare complex serving St. Louis and Jefferson Counties in Missouri, and St. Clair and Monroe Counties in Illinois. St. Anthony's has 3,769 employees, an 850-member medical and dental staff and a 120-member laboratory team. Approximately 70 to 75 percent of patients' medical records contain laboratory testing. St. Anthony's Medical Center laboratory performs more than 1,000,000 billable tests per year, supporting more than 27,000 inpatient admissions; 66,000 Emergency Department visits; and 40,000 Urgent Care visits annually.

OPPORTUNITY FOR IMPROVEMENT

In order to enable prompt diagnoses and treatment, the laboratory adopted lean principles to facilitate faster laboratory result turnaround. "Lean," in the healthcare context, is about shortening the time between a patient entering and leaving a care facility. Within the laboratory, "lean" is about shortening the time between test order and result. Performance improvement objectives were to decrease turnaround time for laboratory results by 10 percent and complete morning rounds earlier by decreasing non-value added tasks and time. The groundwork for making the laboratory "leaner" was laid through staff education and training in the use of "lean" tools. Initial preparation also included organizing and standardizing work areas.

TEAM ACTIONS

The team evaluated value stream maps, process maps, time value graphs and "spaghetti" maps to identify opportunities for improvement. Three areas were selected as targets for improvements, including standardization of phlebotomy carts, specimen delivery to the laboratory, and specimen processing. The team determined that a central processing area needed to be created to eliminate inefficiency of processing specimens in multiple locations. Phlebotomy carts were to be standardized to reduce restocking time. Runners were employed to gather specimens throughout the institution at regular intervals.

RESULTS

After the first cycle of improvement, inpatient stat (urgent) test turnaround times decreased by 24 percent, average morning rounds completion time improved by 45 minutes, and the distances traveled by processing personnel decreased from 11.3 miles to 5.3 miles per day.

FUTURE PLANS

The team created plans to construct a permanent central processing area in the laboratory to facilitate specimen flow. The central processing area construction was completed in August of 2006. A tube system is being implemented that will eliminate the runner process and enhance specimen delivery times. Additional cycles of improvement continue to standardize processes so that everyone does things the same way–every technician, every shift, and every time. Long-range plans are to phase in an automated line for specimen delivery to instrumentation. With the knowledge gained during initial tools training and the real application in the laboratory, future teams will be formed to drive improvements in laboratory services.

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