DRIVING EXCELLENCE & IMPACTING PATIENT CARE THROUGH CONTINUOUS PROCESS IMPROVEMENT

Partnering with Beckman Coulter for Lean Process Implementation

OUR PARTNER, ALVERNO LABORATORIES
Community-based Alverno Laboratories is a joint venture of Franciscan Health and AMITA Health, consisting of 26 hospital laboratories which serve patients within a 250-mile radius in Indiana and Illinois. The award-winning organization operates with a team of more than 1,600 associates, overseeing 6,000 patient beds and 45,000 square feet of central laboratory space. Rapid growth and network consolidation have led the company to seek solutions to promote standardization to help manage costs and ensure fast, consistent results.

Alverno Laboratories Profile
• Performed over 45 million tests each year
• Owns 26 hospital laboratories
• Serves 250-mile radius in Illinois and Indiana
• Holds prestigious ISO 15189 accreditation

ADDRESSING GROWTH AND CONSOLIDATION
Alverno Laboratories remains focused on their mission to deliver quality results by eliminating waste and gaining as much process efficiency as possible. Since beginning its partnership with Beckman Coulter Diagnostics in 2014 and gaining exposure to Performance Partnership methodologies and Danaher Business System (DBS) tools, the organization has adopted an industry-leading culture of continuous improvement. In 2016, it launched the Alverno Business System (ABS), a program focused on driving excellence at all organizational levels. Over a four-year period, Alverno Laboratories has improved quality and increased workflow efficiency in several key areas, significantly shortening turnaround times, while reducing workload burden and lowering costs in key areas.

EMERGING AS A CENTER OF EXCELLENCE
Alverno Laboratories’ expansiveness, wide range of services and drive towards continuous improvement were matched by Beckman Coulter’s broad product portfolio, services and efficiency-enhancing Danaher Business System. Together, the companies set out to help Alverno Laboratories meet its quality and efficiency goals by applying Lean processes to daily management practices and problem-solving techniques.

PROBLEM STATEMENTS

Inconsistency in communication
Lack of standardized procedures
Unclear problem-solving structure

GOAL #1
Facilitate transparency, accountability, and empowerment within the team

GOAL #2
Focus on change management with standardized policies and procedures

GOAL #3
Transform generalized issues into actionable, targeted, and well-defined tasks
CULTIVATING A CULTURE OF CONTINUOUS IMPROVEMENT: STEPS TO SUCCESS

Daily management of key performance indicators (KPIs) provides a team-based visual approach with a regular cadence to ensure process discipline and drive improvements around the most critical metrics. In short, daily management techniques help to ensure that Alverno Laboratories’ foundation stays strong. These strategies facilitate transparency, accountability, communication, engagement and empowerment within the team. They help to overcome previous gaps in unity within the organization, such as inconsistency in communication and a lack of urgency. Simple and repeatable, these KPIs focus on customer expectations and offer tools that promote action to produce results. In addition, daily huddles allow the team to raise and address issues before they become larger problems.

Alverno Laboratories also focused strategically on change management. To address areas within the organization where there was resistance to change, the network involved senior leadership and appointed “Lean Champions” who conducted leadership sessions on a regular basis. The company created mandatory web-based learning and placed into effect standardized policies and procedures to ensure everyone remained on the same page. To support their efforts, a new review tool was also implemented in order to keep working groups on track.

BRIDGING THE GAP WITH PROBLEM SOLVING PROCESS (PSP)

PSP involves identifying a problem and then creating a problem statement. The problem statement acts as a tool to transform generalized issues into actionable, targeted and well-defined items, around which activities can be oriented. Problem-solving activities can take as little as two hours, and teams are encouraged to improve their problem-solving skills through practice. The company has also established problem-solving classes, holding ten within the first year, which resulted in 120 trained leaders.
REAPING THE REWARDS OF ABS AND PSP
Alverno Laboratories’ main objective was to incorporate their 26 hospital laboratories into use of Daily Management and PSP. Through the implementation of the Alverno Business System (ABS) and Lean processes, the organization saw significant improvements in targeted areas of the business.

IN ORDER TO ACHIEVE THEIR GOALS, ALVERNO LABORATORIES:

DEVELOPED TRAINING MATERIALS
to work with DML (Daily Management Liaisons) which built an on-site structure to help work groups drive the improvements and use of the DM and PSP tools more effectively

DEVELOPED COURSE
to better associate Daily Management and associated KPI performance concerns to team based problem solving and root cause counter-measure

USED POLICY DEPLOYMENT GOALS
to measure implementation. Moved from “0” to 38 onsite DMLs across all hospitals and Central Lab Departments in 2018. Increased initial 7 PSPs in 2017 to 85 PSPs performed in the organization in 2018

METRICS-BASED IMPROVEMENTS FROM 2018-2019 SHOWED:

02/01/18 ED CODE FAST TAT
• Decreased pre-analytical processing time
• Decreased tech time spent programming analyzers and entering results
• Overall decrease in total TAT for Code Fast testing
  Initial: 40% unordered
  Goal: ≤ 5% unordered
  Actual: < 1% unordered

05/16/18 PHOSPHOROUS TAT IMPROVEMENT PROJECT
• Reduction in TAT from order to received
• Improved Patient/MD/RN satisfaction
• Increased efficiency and productivity
• Increased awareness of current process
  Initial: 1 hr 46 min
  Goal: 1 hr
  Actual: ≤ 1 hr (46+ min improvement)

05/16/18 TROPINON RECEIVED TO VERIFIED < 35 MINUTES
• Standardized work development
• Increased efficiency and productivity with 7% improvement
• Increased awareness of current process
• Tropinin TAT: 6% improvement, currently at 97%
• Average Tropinin TAT: 21 minutes
  (Goal < 35 minutes)

06/01/18 BLOOD BANK REDESIGN PSP
• Approximately 3 miles of unnecessary walking/month saved
• 90 minutes of Blood Bank techs’ time/month saved which can be spent on productive activities
  Goal: 10% step savings (100 steps)
  Actual: 17% step savings (175 steps)

05/01/18 CHEMISTRY DOWNTIME IMPROVEMENT PROCESS
• More efficient and streamlined process
• Improved utilization of staff
• Standardized work
  Initial: 3 hrs
  Goal: ≤ 1 hr
  Actual: ≤ 1 hr (2 hr improvement)

05/24/18 BLOOD CULTURE CONTAMINATION REDUCTION
• 2.3% reduced to 1.9%
• 12 BC contaminations/month reduction
• Approximately $1 Million/year cost savings (for patient/hospital/ pharmacy/lab)
  • Approximately $96,000/month

06/15/18 DECREASING BLOOD CULTURE CONTAMINATION RATE
• Standardized work development for Phlebotomy and RN Staff
• Increased efficiency and productivity by reducing number of duplicate orders
• Increased awareness of current process and training
  Initial: 3.1%
  Goal: ≤ 2.5%
  Actual: 1.8% after improvements

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Equipment standardization and use of Lean processes through ABS have helped us realize a 20% savings in operating costs.

- Sam Terese, President and Chief Executive Officer
UPON IMPLEMENTATION OF THE NEW PROGRAMS AND PROCESSES, OVERALL SUCCESS WAS SHOWN THROUGH:

**Faster Turnaround Times**
- Approximately 117,000 additional tests met turnaround time metrics in 2018
- 97% of results met their targets in 2017
- 92% of troponin results were turned around in under 40 minutes, up from 87.8% in 2016
- 92% of Franciscan Health Crown Point creatinine results were turned around in 35 minutes, up 1% from the previous year

**Reduced Costs**
- 20% savings in operating costs was seen due to equipment standardization and use of ABS
- Potentially $1.2M million was saved annually due to improvements in blood culture sample integrity

**Increased Efficiency and Staff Satisfaction**
- 40,320 steps, or approximately 20 miles, were eliminated per week - a distance greater than the width of the Grand Canyon
- 11.2 hours of time was saved per week through standardization of specimen management in the molecular department

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Learn more about improving TATs through standardization and automation. Visit please visit www.beckmancoulter.com/contact