Bassett Healthcare Network

ACHIEVING OPTIMAL EFFICIENCY THROUGH 3P AND LABORATORY WORKFLOW REDESIGN

EXECUTIVE SUMMARY

When Bassett Healthcare Network—a large healthcare organization covering 5,600 square miles in upstate New York—invested in new instrumentation for its core laboratory and seven additional facilities. They also sought to maximize the value of their new systems by optimizing workflow. Through partnership with Beckman Coulter, Bassett Health was able to apply a 3P (Product Preparation Process) methodology—transforming operations to increase standardization and reduce redundancies. The strategic approach resulted in increased efficiencies that included a 65% reduction in process steps, a 71% reduction in touchpoints, and a volume increase at the core laboratory of approximately 20%.

PROFILE

Bassett Healthcare Network is an integrated healthcare system serving patients within an eight county region in upstate New York. The not-for-profit organization processes 1.4 million tests annually through its six corporately-affiliated hospitals, two clinics, skilled nursing facilities, community and school-based health centers and related partners.

CHALLENGE

In light of the implementation of PAMA, and anticipated decreased reimbursement the network knew it had to change the way testing was handled across sites, and worked to eliminate inefficiencies in their lab testing operations. Bassett Healthcare recognized that maximizing the value of its new chemistry and automation instrumentation would require a redesign of laboratory space for optimal workflow. Desiring to integrate all network sites into one cohesive laboratory service line, while streamlining processes and minimizing sample handoffs, touchpoints, physical steps and queues, Bassett Health sought solutions to:

- Create a continuous flow through centralized lab processing and send outs, as well as optimize automation line location and connections at the core laboratory.
- Define the optimal workflow for sample processing, staff workstations and instrument layout at O'Connor Hospital and AO Fox Hospital laboratories.

RESULTS

65%
Reduced process steps

71%
Decreased touchpoints

≈ 20%
Increased testing volumes in the core laboratory

- Reduced core laboratory FTEs by two via efficiency gains with the lab automation system
- Increased consistency in overall TATs by reducing variation
- Reduced the instrument footprint at O'Connor Hospital and Fox Hospital laboratories by 50% through the 3P redesign of the lab to optimize flow

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SOLUTION

- Implementation of new clinical chemistry analyzers:
  - Core laboratory in Cooperstown: 2 DxC 700 AU clinical chemistry analyzers and 2 DxI Immunoassay systems
  - Cobleskill Hospital, Little Falls Hospital, O'Connor Hospital, Fox TriTown Campus and AO Fox Hospital: One AU480 clinical chemistry analyzer and one Access 2 Immunoassay systems at each site
  - Fox Care Cancer Center Laboratory and Herkimer Health Center Laboratory: AU480 clinical chemistry analyzers
- REMISOL Advance* data management system
- Power Express laboratory automation system at BMC site
- 3P Kaizen process to optimize workflow

THE TRANSORMATION

As Bassett Health began a network-wide evaluation of chemistry instrumentation, laboratory leaders knew that to guarantee success and enhance patient care, they would need to ensure complete system implementation. They further realized that instrumentation is only part of the equation and that to take advantage of all the efficiencies of a system, they would need a fully engaged vendor partner. They looked to Beckman Coulter and its Danaher Business System for their solution.

Shifting the culture through 3P engagement

To support the goal of network cohesiveness and integration of the sites, Bassett Health used 3P engagement to communicate the coming changes and ensure everyone was on the same page. Bringing all parties to shared tables to discuss new operational models was one of the first benefits the team saw in the process.

The 3P engagement approach was also beneficial as the network moved to a more integrated rapid response model that would reduce test menu redundancies and shift some tests to other sites. Giving team members ownership and autonomy over the layout and implementation of instruments, as well as workflows, empowered them to positively impact operations in their individual laboratories.

Establishing timelines through 3P strategies

The teams worked together to generate a cohesive output plan for moving ahead with the project. Using 3P techniques, staff members worked toward the goal of project implementation, developing a strategy that addressed both the macro-, as well as micro-level, planning.

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Building consistency through a standardized middleware solution

Enhancing efficiency at Bassett Health required standardization. A total of eight laboratories changed instrumentation, so that all would share the same LIS system. This gave all sites the same test build, methodology and reference ranges. This was critical to assure continuity of care as patients can present to any of the facilities in the network. The test menus were also standardized so all the subsidiaries had comparable rapid response menus, and the routine work could be routed to the Core Lab at the medical center. This consolidation of testing lowered the overall cost per test due to the economy of scale, while assuring the appropriate STAT testing was available in all facilities.

> **The 3P process** was key in engaging the front line staff to design a workspace and flow that was both efficient, cost effective and within the constraints of the allotted space. The techniques learned are being extrapolated to other areas of the laboratory.
>
> **- Tim Williammee, Network Laboratory Director**

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