



How One Academic Medical Center Cut Vascular Lab Costs by \$585K Annually While Boosting Capacity 35%

OVERVIEW



When a major academic medical center's vascular diagnostic laboratory was struggling with 60-minute study times and paper-based workflows, they turned to Medstreaming for a comprehensive digital transformation.

The results: **28% faster studies, \$585,000+ in annual savings, and 35% increased capacity**—all achieved with payback in under 12 months across three hospital campuses and multiple outpatient sites.

This case study demonstrates how strategic technology implementation can simultaneously improve operational efficiency, financial performance, and staff satisfaction in high-volume diagnostic environments.

CHALLENGE



As a major academic medical center with expanding service lines, the organization was facing mounting complexities in its vascular diagnostic operations. The laboratory was struggling with outdated, paper-based workflows that couldn't keep pace with growing volume demands across multiple hospital campuses and outpatient facilities.

Critical issues included:

- Studies averaging 60 minutes due to extensive manual data entry and transcription processes
- Paper-based workflows creating bottlenecks and inefficiencies across multiple locations
- Manual transcription errors affecting diagnostic accuracy and requiring time-consuming corrections
- Capacity constraints limiting patient access and creating growing wait times
- Staff burnout from repetitive manual processes impacting retention and job satisfaction
- Limited training resources for resident education and new staff onboarding

SOLUTION



The medical center partnered with Medstreaming to implement a comprehensive digital transformation of their vascular diagnostic laboratory focused on automation, integration, and efficiency.

Medstreaming enabled:

Automated Data Capture & Digital Workflows

Medstreaming's integrated platform eliminated manual data entry and transcription, automatically capturing study information and streamlining reporting processes.

Seamless EMR & PACS Integration

Real-time connectivity with existing hospital systems enabled instant access to patient data, images, and reports from any location across all campuses.

Structured Reporting Platform

Standardized reporting templates and protocols ensured consistency across all locations while supporting quality initiatives and resident training requirements.

Self-Hosted Deployment Model

On-premises implementation provided enhanced data control and security while delivering superior long-term value compared to cloud-based alternatives.

Comprehensive Training & Support

The medical center staff benefited from extensive implementation support, user training, and ongoing optimization to maximize system adoption and efficiency gains.

WORKFLOW OPTIMIZATION



The medical center used the Medstreaming implementation as an opportunity to standardize and optimize vascular diagnostic processes across all hospital campuses. The new digital platform provided an ideal foundation for establishing consistent protocols and performance metrics.

Multiple new standard operating procedures were developed by the laboratory leadership team, ranging from automated study protocols to quality assurance workflows. Laboratory staff embraced the opportunity to focus on patient care rather than manual data entry, with team morale reaching its highest levels in recent years.

The digital transformation enabled enhanced training capabilities for residents and new staff, while providing robust data analytics to support continuous improvement initiatives and research programs.

SUMMARY



The medical center achieved remarkable improvements in operational efficiency and financial performance, with results exceeding initial projections across all key metrics.

28%
STUDY TIME REDUCTION

\$585K
ANNUAL LABOR SAVINGS

35%
CAPACITY INCREASE

<12
MONTHS TO PAYBACK

Overall improvements in key metrics provided comprehensive support for the organization's operational and financial objectives.

Operational Excellence

Study time reduced from 60 to 43 minutes with zero transcription errors through automated data capture

Enhanced Capacity

Laboratory now accommodates 1,000+ additional outpatient studies annually without adding staff

Financial Performance

\$3.5 million Net Present Value over 5 years with additional \$25,000 annual materials savings

Quality Improvements

Standardized reporting across all locations with enhanced compliance and audit capabilities

Staff Satisfaction

Dramatically improved technologist job satisfaction and retention through elimination of manual workflows

About Medstreaming

Designed by clinicians for clinicians, the Medstreaming clinical reporting solution with integrated PACS and inventory management module streamlines workflow for vascular and cardiovascular imaging and structured reporting in both the inpatient and outpatient space. The structured reporting engine and integrated PACS provides the foundation for efficiency across the entire workflow from patient scheduling to final report.

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