Data-Driven Lab Stewardship Empowers Teams and Saves $4M

RESULTS

- **More than $4M in financial impact.**

PRODUCTS

- **Health Catalyst® Data Platform**
- **Instant Data Entry Application**

EXECUTIVE SUMMARY

This large health system identified an increase in testing needs in the emergency department (ED) for coronavirus disease (COVID), influenza, respiratory syncytial virus (RSV), and group A streptococcus were driving up costs. Without clear insight into lab vendor testing costs or a plan to process tests at the point of care, the organization was challenged to contain costs and manage testing delays. To address these issues, the organization leveraged its data and analytics to redesign its ED testing approach, implementing point-of-care testing, and streamlining workflows. These efforts resulted in faster turnaround times, reduced costs, and improved patient satisfaction.

GROWING PRESSURE ON EMERGENCY DEPARTMENTS

Healthcare organizations continue to be challenged by escalating costs and decreased funding, making it increasingly difficult to deliver essential services.[1] Efficiency in the ED is critical for high-quality patient outcomes and operational sustainability. Delays in diagnostic testing can significantly impact ED throughput and patient satisfaction.[2]

BARRIERS TO TIMELY AND COST-EFFECTIVE LAB TESTING

The health system faced several challenges that impeded ED efficiency and increased costs. ED visits for COVID, influenza, RSV, and group A streptococcus were increasing. With increased demand came increased test volumes and costs. Limited visibility into vendor laboratory fees hindered cost-containment efforts, and sending tests to the main lab resulted in delays, frustrating physicians, and negatively affecting patient flow and experience.

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It needed a solution to improve ED lab turnaround times, decrease costs, and improve patient flow.

ANALYTIC INSIGHTS DRIVE ED POINT-OF-CARE TESTING IMPROVEMENTS

The health system's laboratory transformation team prioritized ED laboratory testing for improvement. The transformation team used executive sponsorship, data and analytics from the Health Catalyst® Data Platform, cross-functional collaboration, process redesign, and change management to address challenges and improve performance.

The organization uses a laboratory analytics application and the Instant Data Entry Application (IDEA) to generate new insights. It used IDEA to capture critical vendor cost data for reporting, analysis, and opportunity identification. The team uses the laboratory application to assess and understand lab costs, monitor utilization and cost changes, and ensure appropriate test utilization.

The transformation team researched best practices for COVID, influenza, RSV, and group A streptococcus testing, and identified an opportunity to improve turnaround times while also reducing costs by embracing point-of-care testing. The team used data from the laboratory application to support the development of a pro forma, projecting future test utilization and cost savings from point-of-care testing.

The health system engaged clinicians and care teams to develop and implement standardized point-of-care testing protocols and workflows, standardizing care and workflow efficiency. It implemented standard point-of-care multiplex testing for COVID, influenza, and RSV, and point-of-care group A streptococcus testing processes. The organization implemented point-of-care testing at one facility first, then expanded the ED point-of-care testing systemwide.

> ***Data and analytics from the Health Catalyst data platform gave us the leverage we needed—not just with vendors, but in making confident, evidence-based decisions to improve care processes and reduce costs.***
>
> MSN, BSN, RN, Transformation Manager, Care Transformation Team

> ***Analytics turned raw data into actionable insights, helping us pinpoint inefficiencies and prioritize the changes that mattered the most***
>
> MBA-HC, BSN, RN, Transformation Manager, Care Transformation Team

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RESULTS

The organization's data-driven ED lab transformation, which combined technology, process redesign, and cultural change, has delivered measurable results.

More than $4M in financial impacts, including:

- **$2.6M cost savings in one year, the result of standardizing point-of-care testing in the ED.**
- **$1.5M in avoided costs over eight months, the result of meeting Centers for Medicare & Medicaid Services reporting requirements more effectively.**
- **29K hours faster lab turnaround times, improving provider decision making, ED throughput, and patient satisfaction.**

WHAT'S NEXT

The health system plans to advance the use of data and analytics to monitor and improve laboratory test turnaround time and costs and to support its transformation efforts.

> ***Using data and analytics, we identified and advanced point-of-care testing to accelerate speed of patient care in the emergency department and deliver more than $4M in financial impact at the same time.***
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> MD, Vice President, Information Technology

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Health Catalyst is a leading provider of data and analytics technology and services that ignite smarter healthcare, lighting the path to measurable clinical, financial, and operational improvement. More than 1,000 organizations worldwide rely on Health Catalyst's offerings, including our cloud-based technology ecosystem Health Catalyst Ignite™, AI-enabled data and analytics solutions, and expert services to drive meaningful outcomes across hundreds of millions of patient records. Powered by high-value data, standardized measures and registries, and deep healthcare domain expertise, Ignite helps organizations transform complex information into actionable insights. Backed by a multi-decade mission and a proven track record of delivering billions of dollars in measurable results, Health Catalyst continues to serve as the catalyst for massive, measurable, data-informed healthcare improvement and innovation.

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