



Performance and  
Diagnostics Insights

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## THE CRITICAL ROLE OF PDI IN OPTIMIZING LABORATORY OPERATIONS

*by Jordan Rosenfeld*

Medical laboratories today face tremendous pressure to deliver results faster, more accurately, and more cost-effectively. At the same time, laboratories are facing workforce shortages, rising test volumes, and greater pressure for accountability with hospital leaders. Yet many laboratories lack visibility into their own performance metrics or how they compare to their peers. Without meaningful benchmarks, laboratories are operating in the dark, missing opportunities to optimize efficiency, streamline workflows, and improve patient care.

The American Society for Clinical Pathology's (ASCP)'s Performance and Diagnostic Insights (PDI) platform offers a solution. PDI is a secure, analytics-driven benchmarking tool that transforms real-time data from laboratory information systems into actionable insights. It helps laboratories monitor their turnaround times, compare productivity against peers, assess test utilization, and identify inefficiencies in staffing and resource allocation. More than a reporting tool, PDI can help laboratories support a culture of quality improvement, which can ultimately enhance patient safety.

# THE CHALLENGE: PRESSURE WITHOUT PERSPECTIVE

Modern clinical laboratories face a conundrum: They are under constant pressure to deliver results quickly and accurately, but often without the tools to understand how well they are performing in a broader context. These challenges include:

## OPERATIONAL PRESSURES

Faster turnaround times, tighter budgets, and higher test volumes.

## STAFFING SHORTAGES

Not enough workers are available when testing is busiest, which slows things down and creates bottlenecks.

## LACK OF BENCHMARKING

Ineffective tracking of laboratory internal performance compared against peer institutions.

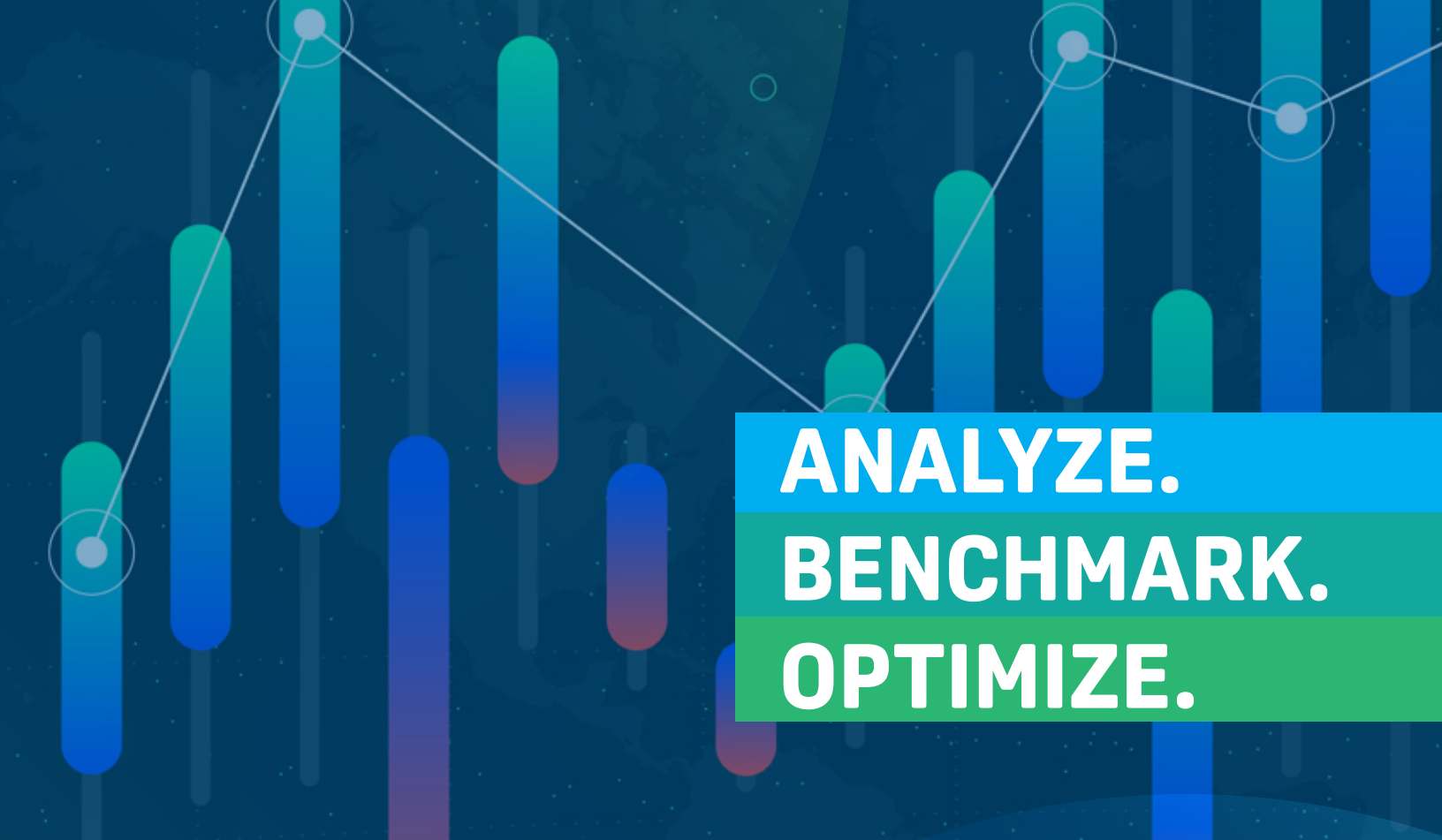
## MISSED OPPORTUNITIES

Without a broader view, laboratories struggle to identify where they are falling short or how to repeat successes.



Sachin Gupta, PhD, MBA, MLS(ASCP)MBI, LSSBB, CPHQ, Scientific Director at ASCP's Center for Quality and Patient Safety, recalls his own time as a laboratory leader:

**“When I was the administrative leader in the laboratory, clinicians always asked me: ‘We know our performance but how do we know our benchmark? How do we know if we are doing better or if we are doing worse? There’s no comparison, there’s no competitive benchmark.’”**

An abstract graphic featuring a dark blue background with a subtle pattern of small white dots. Overlaid on this are several vertical bars of varying heights and colors, including teal, light blue, and dark blue. A white line graph with circular markers connects the tops of some of these bars, suggesting a trend or comparison. The text 'ANALYZE. BENCHMARK. OPTIMIZE.' is prominently displayed in white, bold, sans-serif font, stacked vertically within a semi-transparent blue rectangular box on the right side of the image.

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## WHAT IS PDI?

PDI is ASCP's analytics and benchmarking platform, designed specifically for clinical laboratories. Participating institutions submit their HIPAA-protected data securely from their laboratory information systems. "ASCP's PDI is an analytics and benchmark platform where we ingest and transform the real-time data and we provide actionable insights to our customers," Dr. Gupta says. Those insights are returned in the form of standardized, actionable dashboards and reports.

Accessed through a secure website, PDI allows laboratory leaders to monitor key performance indicators (KPIs) in real time. The platform then ensures compliance with HIPAA regulations and maintains patient privacy, so laboratories can effectively compare themselves to peer institutions.

Dr. Gupta likens the user experience to other familiar platforms: "Think of going on Amazon or into your Netflix account where you can see your data. You can only see your account's information, not any others, but at the same time, it gives you a comparison like, okay, this is where you are, and this is what others have been ordering on Amazon or watching on Netflix."

# CORE BENEFITS OF PDI



## WORKFLOW AND TURNAROUND TIME OPTIMIZATION

**Turnaround time (TAT)** is one of the most visible indicators of laboratory performance, especially in emergency and urgent care settings. PDI allows laboratories to track analytical turnaround time, the time between a specimen received in the lab and when results are reported in the patient's chart and compare it to peer benchmarks in real time.

For example, if one hospital's troponin result takes on average 45 minutes to complete while peer institutions average 35 minutes, PDI highlights the gap and enables root-cause analysis. Laboratories can then adjust workflows, realign staffing, or identify inefficiencies related to use of the instruments.

As Dr. Gupta notes, "That analytical turnaround time is a very critical piece in the laboratories and especially for patients from the emergency room and those who have urgent testing."

Beyond TAT, PDI can provide **detailed workflow assessments**, which helps laboratories identify when and where they are under- or over-resourced. This visibility enables laboratories to reallocate staff to match demand, reduce backlogs, and other efficiency improvements.



## REAL-TIME BENCHMARKING

Benchmarking is not new, but PDI “is real time benchmarking,” Dr. Gupta points out. It allows laboratories to see how they performed in real time compared to peer institutions during the same period.

“If you’re comparing your last week of data, you are also comparing your data with the last week of your benchmarks and the peer’s comparison data.”

Benchmarks can be applied internally, for example across multiple hospitals in a health system, or externally, against similar types of institutions such as academic medical centers. This can help laboratories continuously improve based on the latest data.



## QUALITY AND TEST UTILIZATION

PDI can also help solve ineffective or excessive test utilization, a costly and sometimes harmful challenge for laboratories. It does so by providing utilization reports that flag overuse, underuse, or inappropriate test ordering. “That provides valuable insights into a laboratory’s test utilization,” Dr. Gupta says.

Dr. Gupta points out that PDI then “advocates for ASCP effective test utilization best practice recommendations,” guiding laboratories toward more effective test stewardship.



## RESOURCE ALLOCATION AND COST MANAGEMENT

Laboratories are also facing significant staffing shortages and rising labor costs. PDI addresses these by helping laboratories match staffing resources to test volumes and instrument capacity.

Dr. Gupta highlights how PDI supports leaders in this area: “It may suggest a time your test volume is high at an instrument, so you can adjust staffing. It gives you a measurement of the capacity.”

By identifying inefficiencies, such as overstaffing during low-demand periods or understaffing during peak times, PDI provides laboratory leaders with the data needed to improve their labor distribution.



## CONTINUOUS QUALITY IMPROVEMENT AND PATIENT SAFETY

PDI is more than an operational tool; it's a driver of quality and safety. Dr. Gupta stresses this link: “Improving turnaround time with improving the test quality will help laboratories adhere to best practices, it'll minimize the errors, and of course it'll improve and enhance patient safety.”

PDI fosters a culture of continuous quality improvement, allowing laboratories to track progress over time and validate the impact of process changes.



## ELEVATING THE LABORATORY'S VISIBILITY AND VALUE

Clinical laboratories can be considered the hidden engine of healthcare, essential but often under-recognized. PDI can help bring laboratories to the forefront. Dr. Gupta notes that the platform helps laboratories, “showcase measurable improvements in efficiency and quality and patient care.” By providing measurable evidence of efficiency, quality, and patient safety improvements, laboratories can demonstrate their strategic value to hospital administrators and health system leaders.



## A TOOL FOR THE FUTURE OF LABORATORY MEDICINE

The challenges facing laboratories today, from staffing shortages to operational pressures, are unlikely to go away anytime soon. What will set high-performing laboratories apart is their ability to use data not only to measure their own performance, but to understand how they compare to others and where they can improve.

ASCP's PDI platform provides that capability. As Dr. Gupta summarizes, “It is a tool which provides insight for laboratories to realize that they have an opportunity for continuous quality improvement.”

PDI empowers laboratories to transition from reactive to proactive management. In doing so, it reinforces the indispensable role of the laboratory in healthcare.



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