navify® Analytics for Core Lab

navify Analytics for Core Lab has been implemented at M Health Fairview since September 2023 to provide actionable insights for lab staff to measure the current state, identify opportunities for improvement and deliver advancements. Laboratory staff utilized multiple **navify** Analytics dashboards and the reported insights including major operational improvements are summarised in this infographic.

With navify Analytics, the lab generated at least 48x more actionable insights in one year. Thanks to **navify** Analytics, staff were able to access numerous actionable insights in a matter of seconds instead of weeks, and at more frequent intervals across the year (Fig. 1).

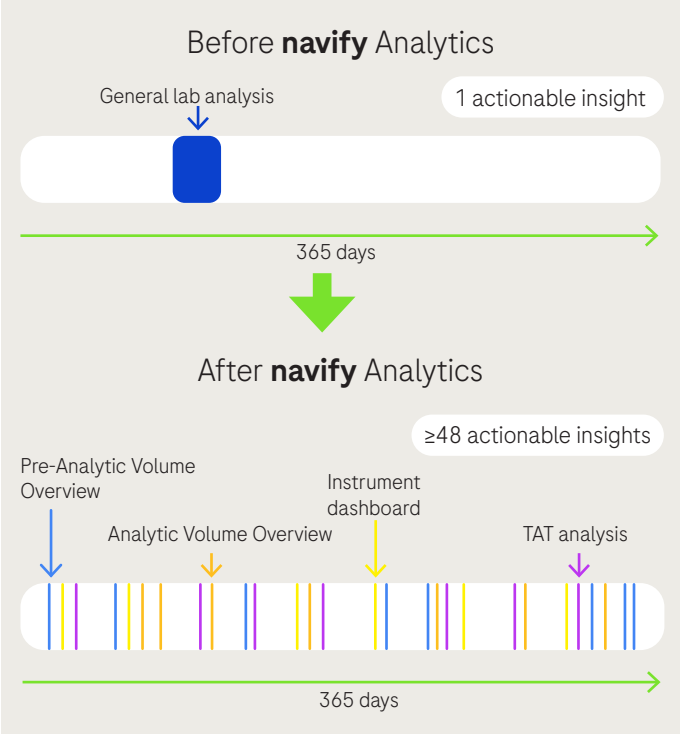


Figure 1. Number and types of actionable insights generated. Thickness of line reflects relative length of time taken to generate insights such as an automated lab performance report.

The **actionable insights** provided by **navify** Analytics significantly enhanced laboratory performance. Targeted changes by lab staff led to an **8.8% improvement** in the number of inpatient sample tests achieving the **internal TAT target**. Moreover, better understanding of the lab's capabilities allowed the East Bank lab to add more infectious diseases tests in their Central Core lab without compromising TAT and service level agreements, leading to a **10.6% year-over-year (YoY) increase** in the number of tests performed (Fig. 2).

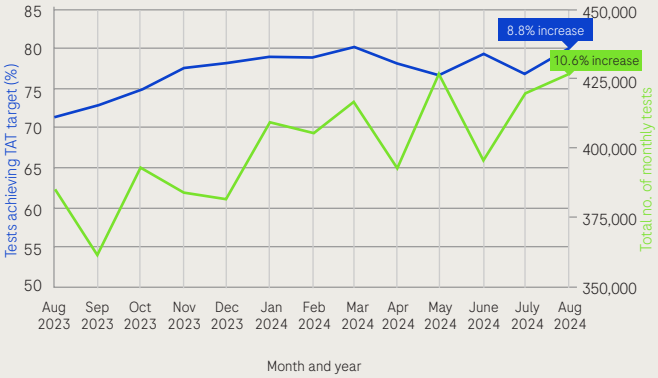


Figure 2. The number of tests performed every month, and the average number of inpatient sample tests reaching the internal target TAT at the East Bank laboratory. TAT of tests performed by the East Bank laboratory was measured using the TAT of Potassium tests as a represenative test.

With navify Analytics, M Health Fairview achieved:

8.8% improvement
in the number of inpatient sample tests meeting the internal TAT target

10.6% YoY increase
in the number of tests performed

Reduced
operational costs thanks to divesting from previously planned investments in new lab equipment and facilities

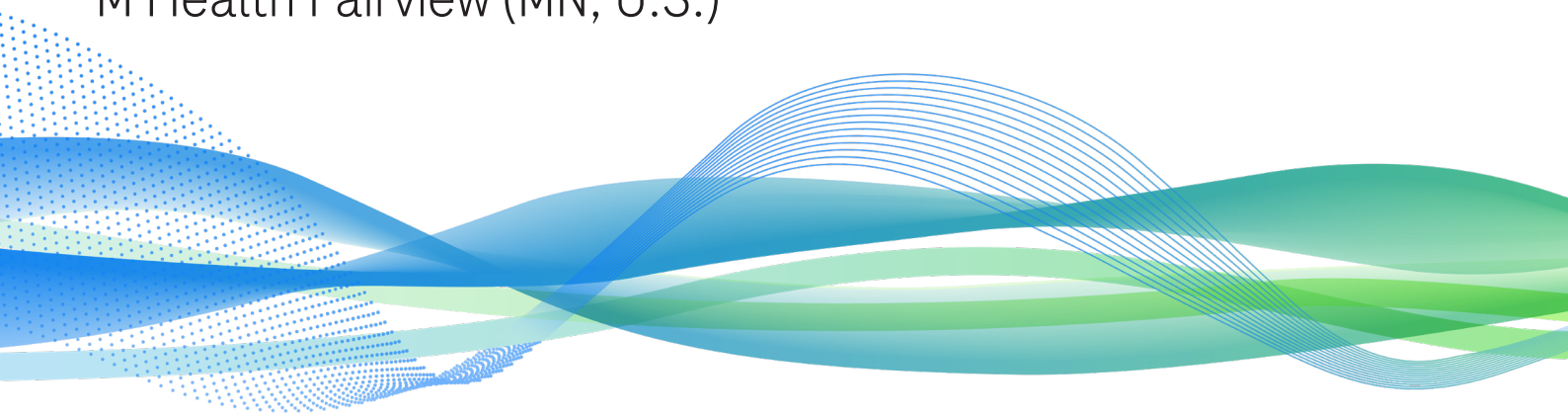
Data from implementation of **navify** Analytics for Core Lab at M Health Fairview in the USA

MC-15699 (February 2025)

navify®

navify® Analytics for Core Lab

Optimizing laboratory performance and efficiency at M Health Fairview (MN, U.S.)



Executive summary

Effective, precise data analysis is increasingly essential in diagnostic labs, where large teams must continuously monitor lab performance to enable timely adjustments, meet quality targets, and satisfy stakeholder expectations.

navify® Analytics for Core Lab provides lab directors and managers a streamlined way to oversee, assess, and identify operational trends and challenges. This enhanced visibility enables data-driven decision-making that optimizes operations, customer service, and overall lab performance with a focus and efficiency.

M Health Fairview located in Minnesota, United States (U.S), recently adopted **navify** Analytics, equipping staff with **easy to generate** and **powerful actionable insights** without relying on external consultants. This implementation led to various improvements, including an **8.8% improvement in the number of tests meeting the internal turnaround time (TAT) target**. Alongside increasing TAT performance, the improved efficiency with **navify** Analytics allowed the lab **add more infectious disease samples**, and **perform 10.6% more tests year -over-year (YoY)**. Additionally, the increased efficiency also rendered some previously planned investments unnecessary, and further **reduced operational costs**. The tangible impact experienced by M Health Fairview, highlights the potential of **navify** Analytics to optimise laboratory performance and efficiency.

At least 48x more
actionable insights to support improvements to lab performance and efficiency.

8.8% improvement
in the number of tests achieving the internal TAT target.

10.6% YoY increase
in the number of tests performed.

Reduced
operational costs thanks to divesting from previously planned investments in new lab equipment and facilities.

Improving laboratory performance entails regular and accurate monitoring of operational data

High performance laboratories have numerous administrative, regulatory and management related tasks that play a key role in achieving quality targets, and satisfying stakeholder expectations. To ensure the lab continues to perform effectively, **regular monitoring of performance is essential**, as monitoring enables lab staff to analyze operational data and identify and action improvements.

Lab performance monitoring entails **rapid** and **continuous generation** of **accurate, relevant** and **detailed actionable insights**. Digital automation of the monitoring process is more efficient, accurate and comprehensive than working with manual data. As healthcare demands increase, laboratories must optimise their operations to adequately support the provision of timely and evidence-driven patient care.

Laboratory priorities for operational success

- Reduce time taken to schedule and prepare reports
- Better organize staff to meet an increase in demands
- Reduce TAT to improve efficiency and increase capacity
- Assess instrument usage to understand capacity and required changes
- Reduce material costs by reducing reruns

navify Analytics generates actionable and data-driven insights to improve operational outcomes

navify Analytics for Core Lab consists of web-based analytics dashboards that convert operational data from **navify** Lab Operations into actionable insights. The dashboards provide an easy way to track, review and identify operational trends and challenges empowering laboratory teams to take action towards improving performance, efficiency and quality while reducing waste. **navify** Analytics provides greater autonomy in managing data and scheduling reports, facilitating access to the right information at the right time, subsequently reducing the time and cost associated with reporting.

Additionally, **navify** Analytics enables precise staff management through data-driven decisions and allows for effective monitoring of action plans.

Recently, **navify** Analytics received high ratings from current customers, according to an independent **KLAS®** Research survey. Specifically, it achieved an overall performance **score of 91.9%,** compared to the 2023 Best in KLAS average of 79.6% for this category.[1] Furthermore, **100% of the customers interviewed reported being highly satisfied or satisfied**, and 90% of professionals acknowledged it delivered tangible outcomes.

Benefits of navify Analytics:

Reduce time and effort spent on reports by generating automated reports at chosen intervals

Analyze lab trends and identify performance issues such as high TAT and excess reagent consumption

Manage staff effectively using data driven decisions

Case Study: M Health Fairview's (U.S.) experience with navify Analytics

M Health Fairview serves 10 hospitals, accounting for more than 60 clinics and over 3,300 providers, including the nationally leading M Health Fairview Cancer Care Center. M Health Fairview laboratory medicine and pathology department accounts for one core/acute lab, nine acute hospital labs, and two ambulatory labs, totalling approximately 15 million billable tests per year, among which 13 million are chemistry tests.

- **10 hospitals and over 60 clinics.**
- **12 laboratories, including nine acute hospital labs.**
- **15 million billable tests.**

M Health Fairview's mission is to create an easier, simpler healthcare experience – making sure each moment shared with every customer matters. To achieve this mission, M Health Fairview recently transitioned from a regional sites model to a hub-and-spoke model using Roche devices and digital solutions, thus standardizing instrumentation across the whole organization.

"Together, we will rise to meet this moment in order to create healthcare that is more affordable, accessible and equitable. Healthcare that makes our community better, for everyone, today and long into the future" [2]

James Hereford
President and CEO of M Health Fairview

navify Analytics led to at least 48x more actionable insights in one year

Before implementing **navify** Analytics, collating analyzer-specific data such as information on specimen quality, reagents and operators required the involvement of an external analytics consultant, which could take weeks to outsource and organise (Fig.1). Due to a cumbersome and lengthy process overall, analysis occurred once or twice a year at most.

This analysis fell short of the daily analysis and monitoring M Health Fairview sought to achieve. Additionally, insights generated with external consultants were occasionally inconclusive, necessitating another cycle of review, further increasing the time taken to complete the insights (Fig. 1).

navify Analytics was implemented at M Health Fairview since September 2023 to provide actionable insights to enable lab staff to measure the current state, identify opportunities for improvement and deliver advancements.

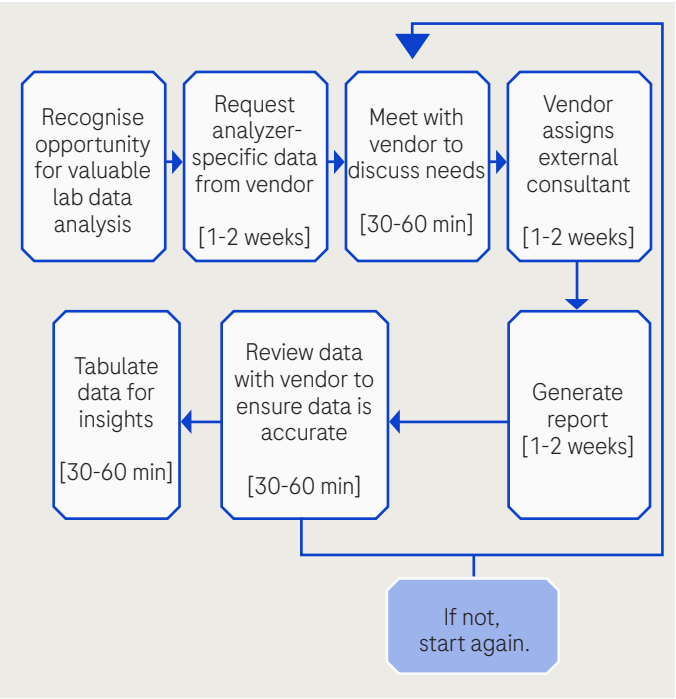


Figure 1. M Health Fairview's insight generation process before implementing **navify** Analytics. Description of actions and time taken to perform each step.

Laboratory staff at M Health Fairview utilized multiple **navify** Analytics dashboards, including the instrument dashboard and TAT analysis dashboard (Fig. 2). Laboratory staff reported new insights and operational improvements that resulted from using the **navify** Analytics dashboards.

Thanks to **navify** Analytics, staff were able to access different types of actionable insights in a matter of seconds instead of weeks and, thus, could conduct analyzes at more frequent intervals in the year (Fig. 2). The insights were well-organized and easy to understand, enabling the lab staff to make several improvements to their workflow and subsequently drive positive changes in the broader healthcare environment.

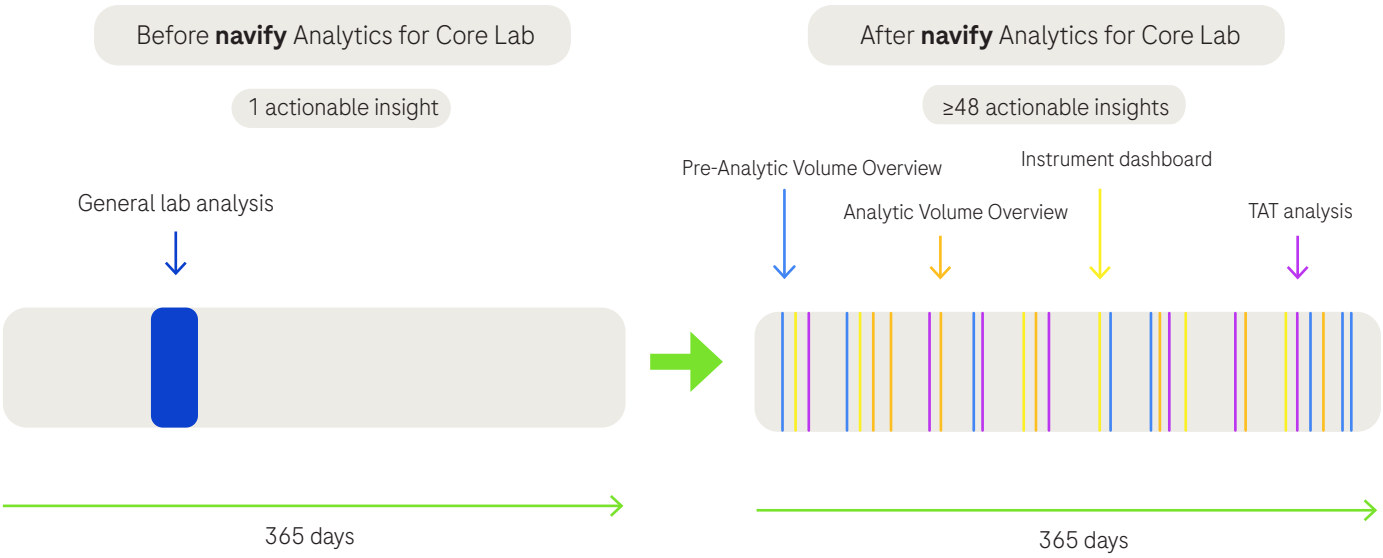


Figure 2. Number and types of actionable insights generated over one year before and after implementation of **navify** Analytics. Thickness of the line reflects relative length of time taken to generate insights such as an automated lab performance report.

The TAT dashboard facilitated targeted changes by lab staff and optimised the efficiency of lab test reporting

The **navify** Analytics TAT dashboard allowed the West Bank laboratory of M Health Fairview to record and monitor the TAT for every test, and the number of tests that did not achieve the target TAT (Fig. 3). With these insights, the lab could implement targeted changes to the maintenance times, aiming to improve the TAT of tests. The TAT dashboard highlighted that peak volumes of samples were processed between 5 am and 10 am, mainly due to early morning inpatient rounds (Fig. 4). Further insights uncovered that the rate at which lab test results were being processed and reported decreased between 9-11 am. One of the two analyzers performed daily maintenance during 9-11am, negatively impacting instrument throughput. Daily maintenance tasks were moved from 9-11 am to 7-9 pm to optimize the efficiency of lab test processing.

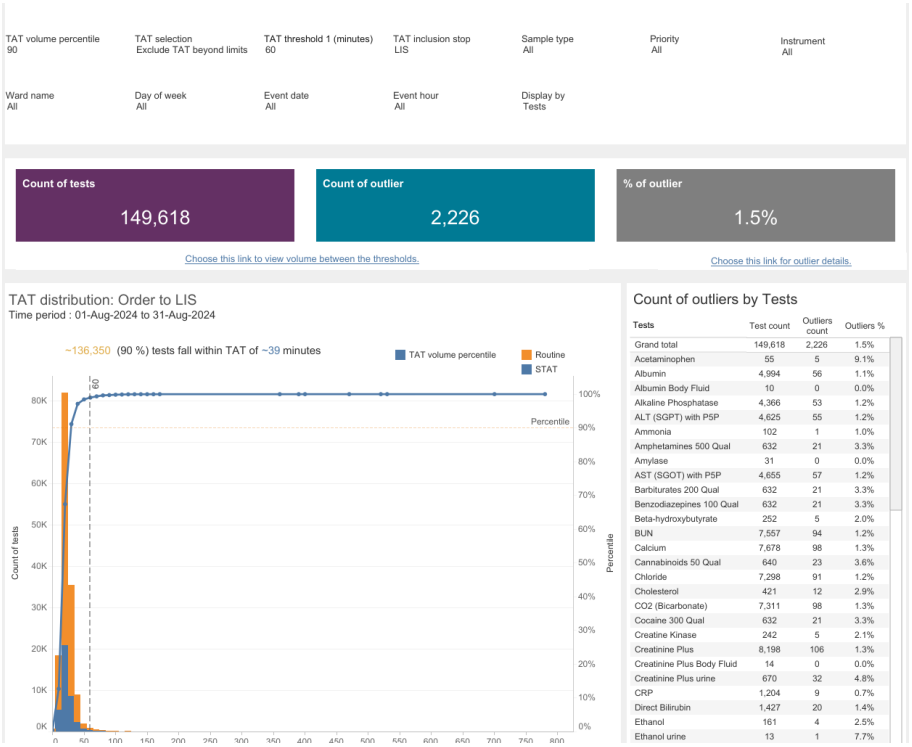


Figure 3. TAT dashboard used to monitor changes to TAT.

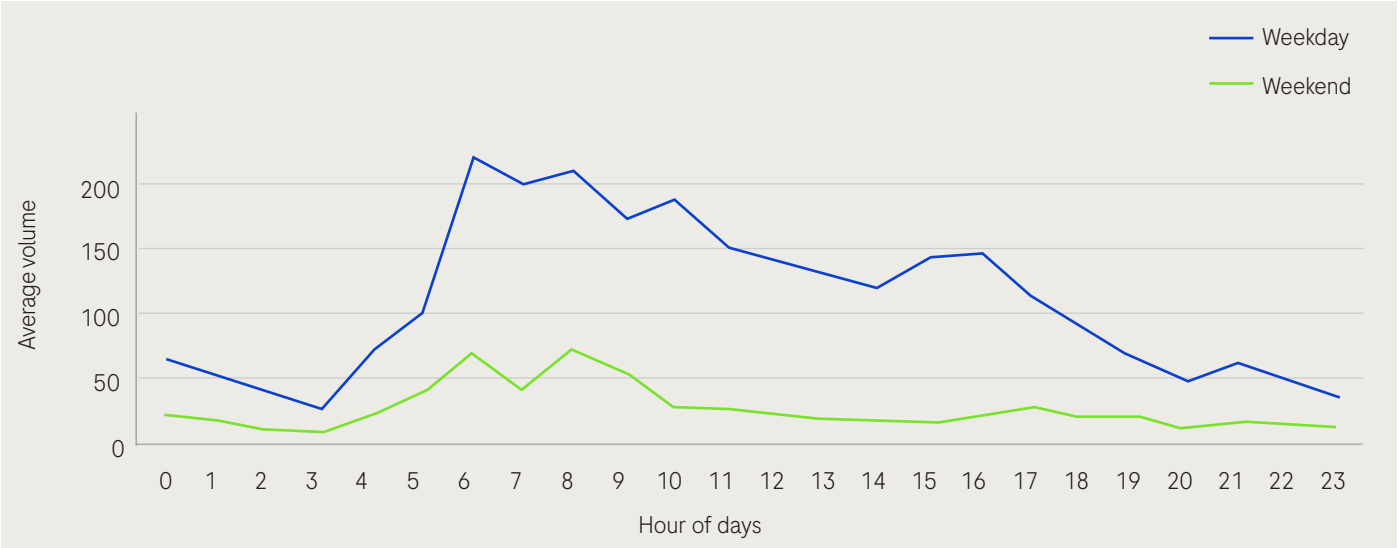


Figure 4. Average volume of samples processed and reported each hour on weekdays vs weekends. Insights from hourly **navify** Analytic volume overview dashboard.

Central Core lab achieved significant improvements in inpatient tests' TAT

The actionable insights from the **navify** Analytics dashboard's allowed the Central Core lab staff at the M Health Fairview's East Bank laboratory to gain insights into their operational efficiency and ability to meet TAT targets across various inpatient tests. The Central Core lab used the actionable insights from the **navify** Analytics dashboard's to make targeted changes both in and outside of the lab. These changes included raising awareness among phlebotomists about their role in the sample journey (by its collection), which helped to speed up internal processes.These changes led to an 8.8% improvement in the number of inpatient sample tests meeting the internal TAT target, and these improvements were maintained over the following months (Fig. 5). Improving TAT time provided M Health Fairview with better capacity to meet the demands of the healthcare facilities served by the laboratories.

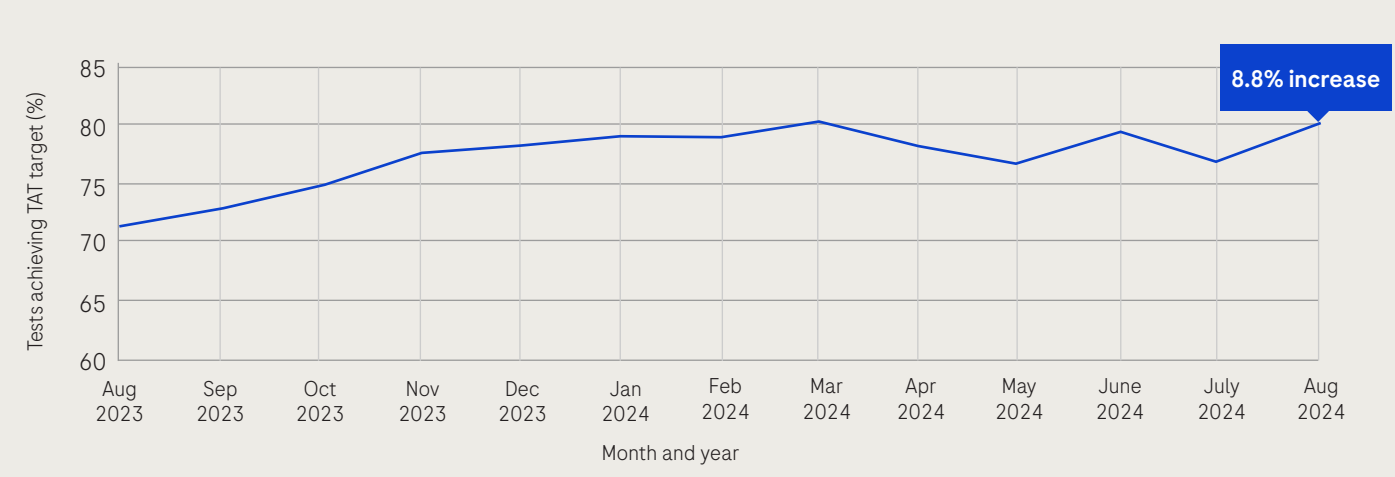


Figure 5. Average percentage of inpatient sample tests achieving target turnaround time (TAT) every month. TAT of tests performed by the East Bank laboratory was measured using the TAT of Potassium tests as a representative test.

In-depth analysis of instrument utilization led to an increase in the volume of tests being performed

A key goal of M Health Fairview was to ensure the hub from their hub-and-spoke framework could increase the volume of tests being processed and allow the spoke labs to focus on specialty tests. This arrangement would optimise the efficiency of existing equipment whilst potentially lowering operational costs. The East Bank laboratory used the Instrument Utilization dashboard to understand whether the increase in the processing of tests by the hub (newly automated centralized core lab) would negatively affect analyzer performance.

The dashboard confirmed stable performance with a utilization rate of 20.2%–20.5% on the main cobas Pro analyzers (Fig. 6), which subsequently confirmed additional capacity for more tests. Better understanding of the lab's capabilities from these actionable insights allowed the lab to add more infectious diseases tests in their Central Core lab without negatively impacting the service level agreement and the TAT (see Fig. 5). Increased efficiency and the addition of more infectious disease tests, led a 10.6% YoY increase in the number of tests performed (Fig. 7).

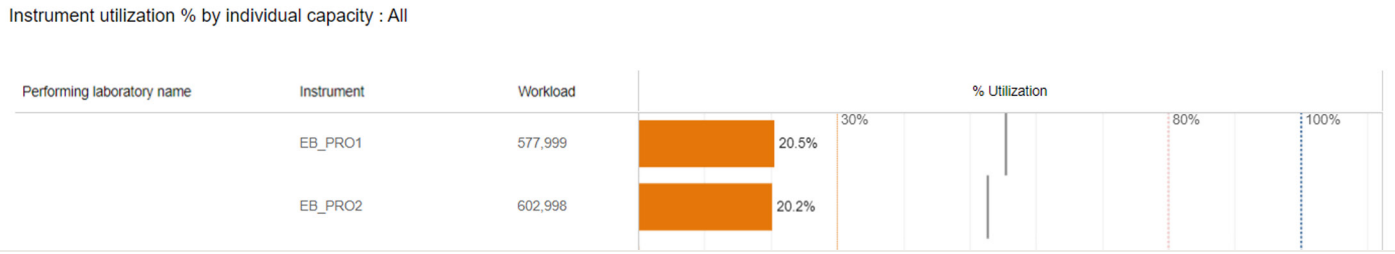


Figure 6. Instrument Utilization dashboard in **navify** Analytics showing instrument utilization (%) by individual capacity of two instruments.

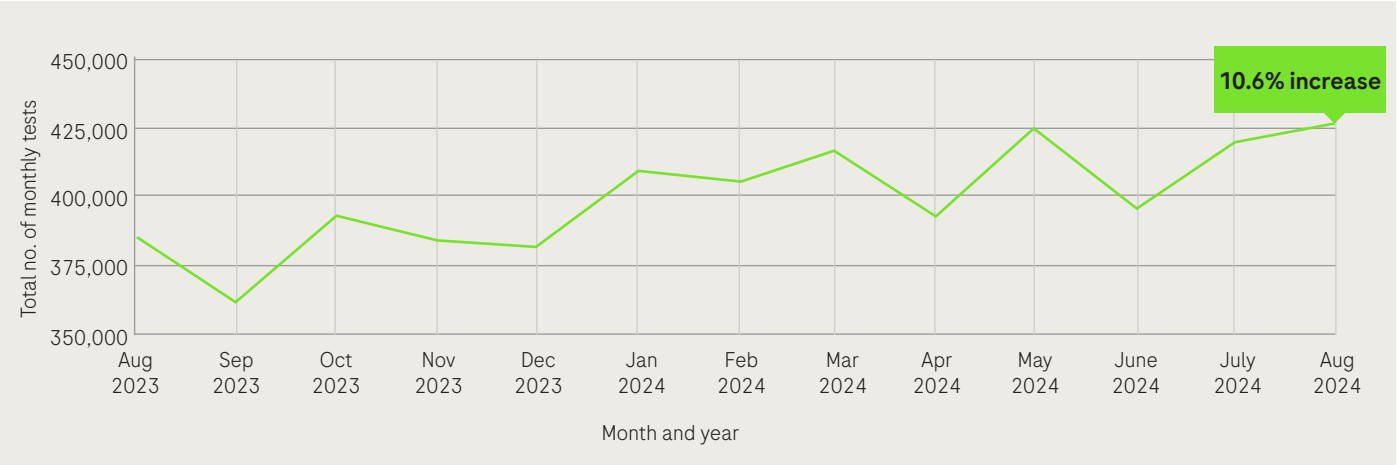


Figure 7. Number of tests being performed at East Bank Laboratory from August 2023 to August 2024.

"Being able to show the data for available analyzer capacity gave us credit with our senior executive leaders that had concerns about how the change would impact patient care."

Jina Forys MBA
MLS (ASCP) Director, M Health Fairview Laboratories

Reduced operational costs by divesting from previously planned investments

Before implementing **navify** Analytics, the lab considered purchasing new instruments, such as an additional refrigerator for reagent storage. Due to the insights from navify Analytics, the lab staff identified areas for improvement in reagent management, such as adjusting ordering volumes. By optimizing the quantity of reagents to a level that was minimal yet sufficient for efficient lab operations, they eliminated the need to purchase an additional instrument.

"Not using valuable real estate in an already cramped lab for another refrigerator was a relief for both staff and leaders."

Jina Forys MBA
MLS (ASCP) Director, M Health Fairview Laboratories

Focusing on the right key performance indicators with navify Analytics

With **navify** Analytics, instead of looking at each dashboard in isolation, lab staff were able to examine multiple dashboards simultaneously to uncover potential correlations in data. For example, lab staff wanted to determine if the imbalance of analyzers during early morning peak hours was delaying turnaround time (TAT). By reviewing data from the Sample Workload and Test TAT Distribution dashboards, they confidently ruled out device load imbalances having an impact on TAT.

Consequently, staff redirected their efforts to identifying the relevant KPI's affecting TAT. This change captured a key cost-opportunity benefit, as it avoided the inefficiency of investing time in less relevant areas, such as the impact of device imbalance on TAT. This analysis also confirmed the Roche automation system's capability to handle sample peaks efficiently and distribute workload in a real-world scenario without compromising the overall TAT.

Conclusion

This case study demonstrates that when leveraged by staff, the **actionable insights** provided by **navify** Analytics can significantly enhance laboratory performance. Specifically, targeted changes by lab staff led to an **8.8% improvement** in the number of tests meeting the internal TAT target. Also, **increased lab efficiency** allowed the addition of infectious disease tests without compromising TAT, which led to **10.6% YoY increase** in the number of tests performed. Furthermore, the lab **avoided unnecessary costs** by divesting from some previously planned investments in new lab equipment and facilities.

However, this is just the beginning. The insights gained from **navify** Analytics can be leveraged to drive further improvements in the lab over the years. Current focus areas for the lab staff include rerun analysis, potential further reductions, and the possibility of extending the TnT hemolysis limits.

navify® Analytics for Core Lab

Generate actionable insights with ease and at frequent intervals

Increase lab efficiency by analysing continuous TAT data

Eliminate unnecessary costs by identifying areas for improvement

*"**navify** Analytics allows us immediate access to data from our analyzers that we would otherwise not have access to at our fingertips."*

Jina Forys MBA, MLS (ASCP)
MLS (ASCP) Director, M Health Fairview Laboratories

Disclaimer: Individual lab results may vary, and testimonials are not claimed to represent typical results. All testimonials are real participants, and may not reflect the typical purchaser's experience, and are not intended to represent or guarantee that anyone will achieve the same or similar results.

References

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2. Fostering Health and Equity in St. Paul & East Metro [Internet]. [cited 2025 Feb 21]. Available from: https://www.fairview.org/east-metro