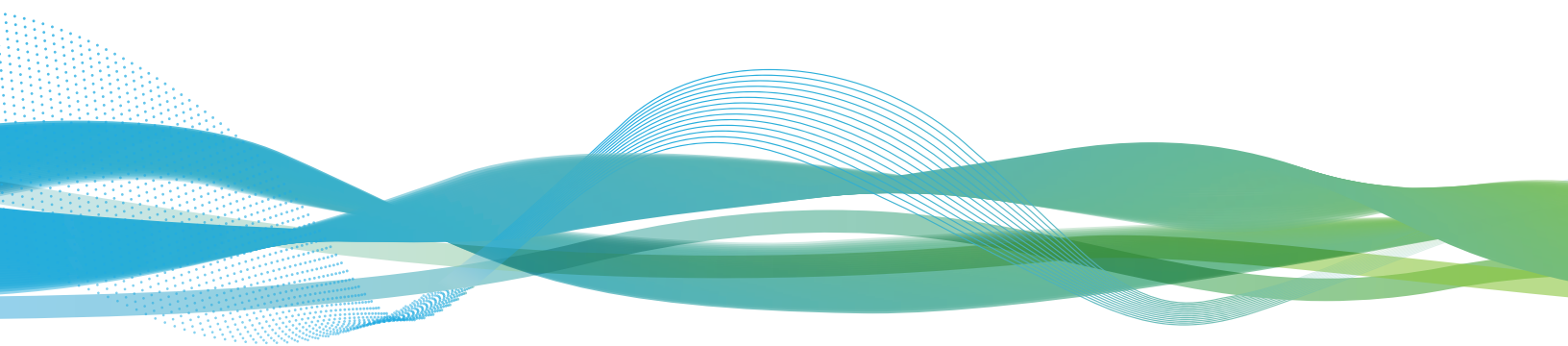




Analytics for Core Lab Case Study



CGMH Tucheng
optimizes their
lab's workflow
and reduces
their TAT



navify® Analytics provides insights into workflow bottlenecks and helps to identify operational improvements leading to faster delivery of test results.

About CGMH Tucheng



- Department of Laboratory Medicine at New Taipei Municipal Tucheng Hospital (Chang Gung Memorial Hospital Tucheng)
- Active 24/7
- 1,600 tubes/day
- The laboratory started its operations in 2020
- Offers more than 160 different tests

MC--11758

Situation

The Department of Laboratory Medicine at CGMH Tucheng is committed to specific SLAs to deliver test results to departments treating both inpatients and outpatients in a highly dynamic city hospital environment. The laboratory at CGMH Tucheng operates according to strict guidelines on quality controls and turnaround times: in a constant effort to optimize laboratory performance, the Lab Director endeavoured to monitor and improve performance on test delivery for urgent outpatient samples as a first step toward optimal operational efficiency.

Solution

Lab Director Mr. Lin and his team accessed relevant lab workflow data on **navify**® Analytics to establish a baseline of their current performance on STAT (urgent) outpatient samples for which acceptable turnaround time (TAT) is set by CGMH Quality Committee at a maximum of 60 minutes. The lab was shown to produce the required results in 55 minutes (avg.).

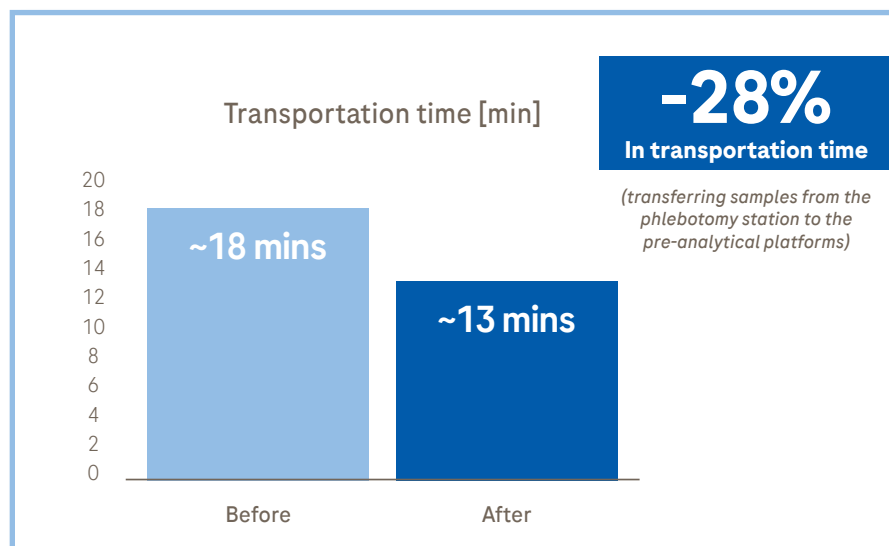
Analyses performed on **navify** Analytics showed that transportation time took up a large portion of the overall diagnostic workflow: in a typical month, the process of transferring samples from the phlebotomy station to the pre-analytical platforms in the lab was executed in 18 minutes (avg.), amounting to 38% of the total TAT. Using these data, the lab identified a bottleneck on the automated transmission system and intervened to reduce the delay in sample delivery. As a result, data analysis run on the month following the workflow change showed a 28% decrease in transportation time, with an optimized transportation flow completed in 13 minutes (avg.).

In parallel, analytical performance was evaluated through the examination of multiple parameters that might affect TAT such as rerun rates, instrument utilization levels, autovalidation and workflow setup. Recurrent delays were identified in relation to individual samples sharing common patterns: whenever tests such as LDH, Cortisol and CO2 were requested on urgent samples, overall TAT was over 60 minutes. Examining samples' lifecycles using **navify** Analytics highlighted an under-optimal workflow setup. Re-engineering the testing prioritization on analyzers to streamline the workflow determined a substantial decrease in the analytical TAT: LDH's average TAT dropped from 67 minutes to 13 minutes, equal to an 80% decrease, with a subsequent impact on samples' overall TAT performance.

Benefits

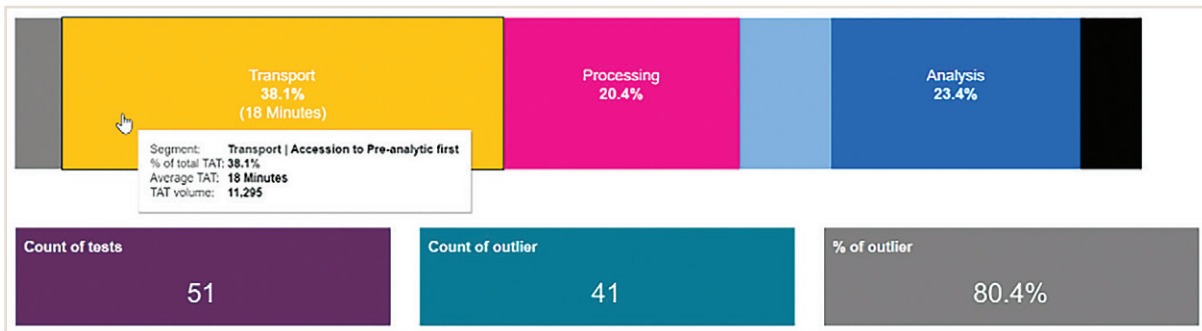
Streamline pre-analytical processes

Analysis of data processed through **navify**® Analytics allowed the lab to identify inefficiencies at the sample collection and sample transportation stages. The evidence collected motivated the hospital phlebotomy department to integrate changes in tube collection and transportation workflows that led to a 28% decrease in the pre-analytical TAT for all serum samples.

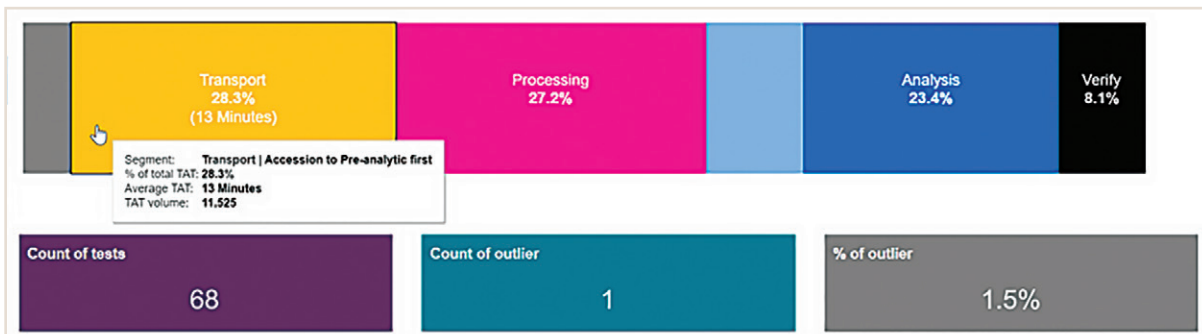


Average TAT by segments

Before: August 2022



After: October 2022

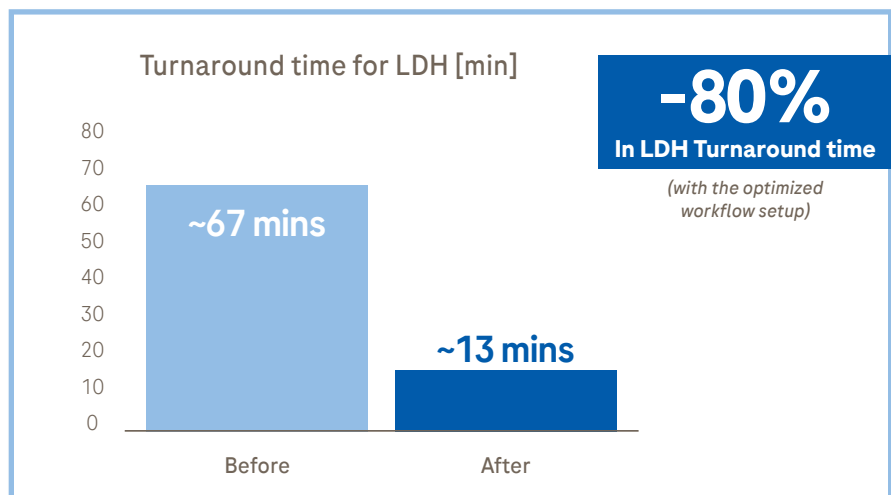


“We re-engineered our lab workflow based on insights from navify Analytics, with a novel data-driven approach. Our pre-analytical TAT improved by 28%.”

Mr Lin | Lab Director

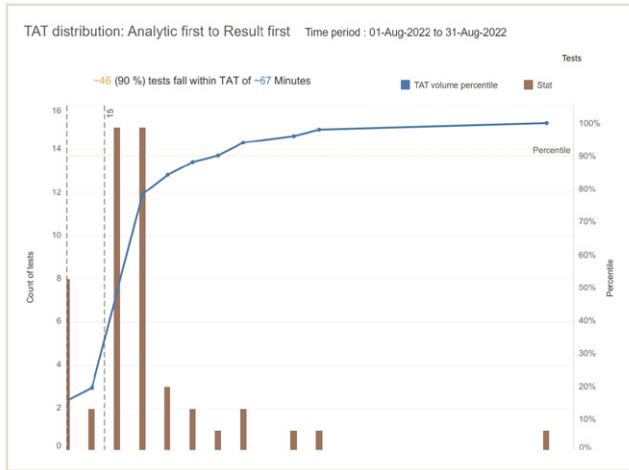
Reduce turnaround time

The lab being highly efficient, the main initiative was directed at improving the TAT of STAT samples collected from the Outpatient Department. Re-engineering pre-analytical and analytical processes based on the data reviewed on navify Analytics allowed the lab to reduce analytical STAT TAT of specific tests by up to 80%.

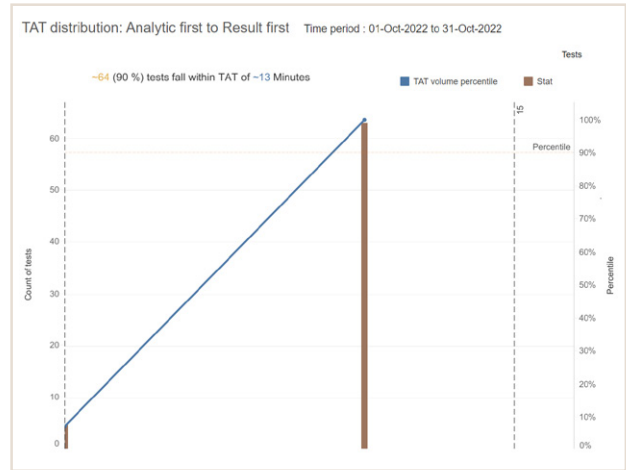


TAT Distribution

Before: August 2022



After: October 2022



“navify Analytics helped us to identify the root causes of our TAT delays. The countermeasures we introduced allowed us to cut analytical outliers on specific assays by 80%.”

Mr Lin | Lab Director

Conclusion

The granularity of data available in **navify**® Analytics for Core Lab has allowed the Department of Laboratory Medicine at CGMH Tucheng to begin data-driven, operational workflow optimization efforts which have resulted in measurable performance improvements.

Disclaimer: Individual lab results may vary, and testimonials are not claimed to represent typical results. All testimonials are from 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.



Signature Page for MC--11758 v1.0

| | |
|---------------------|---|
| Regulatory Approval | Ewald Schönhofer Regulatory 08-May-2023 14:30:37 GMT+0000 |
|---------------------|---|

Signature Page for MC--11758 v1.0