Kolín Hospital improved STAT TAT while managing higher peak demand

STAT TAT improved by 26% while volume increased 66% after transitioning away from track automation

SIEMENS Healthineers

Kolín Hospital

Kolín, Czech Republic

Lab Profile

The biochemistry laboratory at Kolín Hospital serves a region with over 120,000 inhabitants. It manages inpatient and outpatient samples, with 24-hour support for STAT pediatric, maternity, and critical care services.

- Regional/General Hospital with 550 beds
- **Tubes per day:** 600
- **Tests per day:** >5000
- 40% STAT weekdays, 99% STAT weekends

Challenge

- **Workflow Transformation**: Transitioning to a decentralized, analyzer-centric automation model without disrupting productivity.
- **Capacity Management**: Managing rising sample volumes with constrained staffing and fewer manual interventions.
- **TAT Optimization**: Improving consistency and STAT and routine TAT while maintaining quality and efficiency.

Risk

- STAT delays could negatively impact inpatient and critical care decision-making.
- Manual workload could increase if total testing process workflows were not fully optimized and adopted.

“There has been a significant acceleration of analytical processes... but the greatest satisfaction comes from seeing our laboratory staff successfully adopted the system, enjoy their work, and continue identifying new improvements.”

Ing. Pavel Vondráček
Head of Laboratory,
Kolín Hospital

“The statements by Siemens Healthineers’ customers described herein are based on results that were achieved in the customer's unique setting. Because there is no “typical” hospital or laboratory and many variables exist (e.g., hospital size, samples mix, case mix, level of IT and/or automation adoption) there can be no guarantee that other customers will achieve the same results.”

Kolín Hospital accelerated TAT without expanding footprint

Task-targeted automation and integrated workflow IT reduced STAT TAT by 26% and routine TAT 31% while supporting a 66% increase in peak sample volume

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Solution

Automation and IT

- 1 x Atellica Task Targeted Automation
  - Sorting, centrifuge, decapper, aliquoter, recapper, sealer modules
- 1 x Atellica Data Manager
- 1 x Atellica Process Manager

Analytical

- 1 x Atellica Sci + + decapper and sealer
- 1 x Atellica Sci
- 1 x IMMULITE 2000 XPi System

Success Factors

- ✓ Seamless integration across analyzers, automation, and IT with intelligent workflow design
- ✓ Task-targeted automation design beyond the traditional track
- ✓ Centralized QC and reduced manual validation through Atellica Data Manager and Process Manager
- ✓ Workflow design optimized for lab space, staffing, and rising volume

Kolín Hospital replaced a non-Siemens automation track with task-targeted automation and integrated workflow IT, enabling **streamlined sample handling**, **reduced manual processing**, and **greater flexibility** in daily operations.

The solution combined analyzer integration, sample routing, centralized QC, and workflow orchestration to help maintain consistency during peak demand within a reduced laboratory footprint.

Outcomes

-26% **STAT TAT reduction** (from 47 to 35 min, check-in to validated result)

-31% **Routine TAT reduction** (from 87 to 60 min, check-in to validated result)

+66% **Peak sample** volume increase

+19% **Test volume** increase

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