

Faster turnaround-times and major efficiency improvements drive end-to-end lab gains

Valley Children's Hospital enables lab clinicians to get more done faster, improving patient care, with Instrument Manager™ Autoverification



Valley Children's Hospital Facts

- Pediatric Hospital
- 330 beds
- 94 Laboratory Staff
- Located in Madera, CA
- LIS: Meditech, migrating to Epic Beaker

Challenges

- Need to support increased testing volumes
- Wanted to streamline workflows to improve turnaround-time
- Required flexibility to support all disciplines across the lab

"Instrument Manager Autoverification was a lifesaver for us. We improved workflow efficiency with limited staffing and improved test turnaround times."

- Lydia Archuleta, Clinical Lab Scientist & Middleware Project Manager

Like most labs in today's environment, Valley Children's was under pressure to do more, faster – and often with fewer resources. In an effort to provide more value for their patients, they implemented LEAN principles that reduce wasteful practices and allow Clinical Laboratory Scientists to work at their maximum skill level. The team at Valley Children's determined they needed to improve workflow efficiency and make those workflows consistent.

This coincided with a lab-wide project to implement new chemistry analyzers. While the immediate priority was to address the need for chemistry analyzers, Valley Children's knew they had to ensure any workflow solution they ultimately selected had the flexibility to accommodate multiple disciplines across the lab to achieve the turnaround-time efficiencies they had set as their objective.

Efficiency gains, enhanced quality, and modernized workflows with Instrument Manager Connectivity and Autoverification

The need to improve turnaround-times, automate workflows to achieve efficiencies - and to do it all with quality and patient outcomes top-of-mind – required the end-to-end lab enablement solutions offered by Instrument Manager from Data Innovations. The solution needed to support multiple disciplines – including hematology, coagulation, chemistry, urinalysis and body fluid analysis - across the Valley Children's lab, an area where Data Innovations could meet demands.

Results automation removes manual work

Valley Children's needed a comprehensive solution that would help them achieve their workflow efficiency goal of providing staff more time to focus on abnormal rule exceptions. They needed proven and flexible capabilities they could trust. With Autoverification from Instrument Manager (IM), Valley Children's can flexibly create rules to automate the validation of more than 80% of test results passing through the lab, eliminating the need for manual intervention.

Accelerated turnaround-times deliver faster results

Valley Children's knew that integrating instruments using a centralized lab enablement platform like Instrument Manager was just the start. They needed to implement workflows across the entire lab that would allow them to process more test results faster. Within two years of their IM roll-out, Valley Children's lab saw an average turnaround time improvement of seven to nine minutes per sample across more than 600 per day. The result? Hundreds of hours of workflow capacity added to daily lab operations, combined with faster



Valley Children's improved their average testing turnaround-times by 7-9 minutes across 600+ samples per day.

Solutions

- Integrated instruments from different vendors across four disciplines, and counting
- Implemented Autoverification for automated test validation
- Simplified instrument validation and quality monitoring with EP Evaluator and bi-directional QC

Results

- Improved average test turnaround-time by 7-9 minutes
- Automated test validation for 80%+ of tests
- Added hundreds of hours of lab workflow capacity

turnaround-times. Together, this meant that the lab could take-on additional testing because of time gained with Autoverification – and they could do so without having to add staff.

Support for every discipline in the lab

Valley Children's conducts an average of 600 samples per day across various disciplines, including hematology, coagulation, chemistry, urinalysis and body fluid analysis. Valley Children's needed a solution that would seamlessly support all disciplines and instruments in the lab. Leveraging Instrument Manager's comprehensive driver library of more than 1100 drivers and growing, Valley Children's was able to start strategically with the integration of new chemistry analyzers, while continually adding new instruments across disciplines over time without being limited as to which vendors and instruments they could choose.

Keeping quality on track

The reach of Data Innovations solutions in the Valley Children's lab doesn't stop with Instrument Manager. For years before their implementation of Instrument Manager, the team at Valley Children's relied on EP Evaluator to evaluate and measure clinical laboratory instrument performance, and to provide "inspector-ready" reports meeting CLIA, CAP, TJC and other critical requirements. Additionally, the lab relies on IM's bi-directional QC capabilities to integrate with Bio-Rad, establishing more efficient and accountable QC processes.

Next Steps: Improved QC, accelerated analytics, and more instruments

Valley Children's continues to expand their Instrument Manager footprint across the lab, with its long-term goal of increasing quality and workflow efficiency at the fore. Not only is Valley Children's continuing to add more instruments for molecular and microbiology– a given for a growing lab – they are also continually extracting more insight and value from their IM implementation. The team is currently deploying Lab Intelligence, IM's lab-focused business intelligence solution designed to provide real-time, at-a-glance snapshots of laboratory operations through customizable dashboards.

About Valley Children's Hospital

Valley Children's Hospital is a nationally respected dedicated pediatric hospital in Central California. With more than 650 physicians, 3,400 staff, and 330 beds, Valley Children's delivers comprehensive care to more than 1.3 million children. The hospital operates a dedicated clinical lab with nearly 100 clinical laboratory staff.

About Data Innovations

Data Innovations is a global software company that is passionate about excellence in patient care. Through innovative solutions and world-class service, we enable enterprise management of hospital and independent laboratories. Founded in 1989 with headquarters in Vermont, Data Innovations serves more than 6,000 hospitals and laboratories in 85+ countries.

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Instrument Manager Autoverification?

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