

THE RIGHT TOOL FOR THE TIMES:

How to Manage COVID-19 Testing in the Workplace



HEALTH AND SAFETY FIRST

To get employees back onsite, and university students on campus, testing for COVID-19 is a means of keeping everyone healthy and safe. Maintain accurate, reliable, and secure testing data with a purpose-built COVID-specific lab informatics solution.

Although indications began to appear as early as mid-February, it took another six weeks to confirm the worst fears about the SARS-CoV-2 virus that causes COVID-19: asymptomatic transmission was a reality.

Suddenly, there was the realization that anyone could be a carrier. Accordingly, effective, accurate testing took on new importance. In the absence of a vaccine, testing was all that could ensure that people could return to the workplace or school with the assurance they wouldn't infect others, and with the peace of mind that those around them were safe, too.

In this unprecedented situation, when a rapid response was essential, the investment in innovative technologies paid dividends. A prime example is LabVantage Solutions' purpose-built COVID-19 LIMS, built on the company's industry-leading laboratory informatics management system (LIMS). This new tool for managing testing for the virus and the presence of antibodies provides a powerful, flexible, and easy-to-use solution that can be quickly implemented — as a software-as-a-service (SaaS), via the cloud, or on-premise, as the user requires.

Released in late April, this pre-configured solution addresses the needs of corporations and institutions looking for accurate, reliable testing and tracking methodology that met multiple demands, among them: privacy, accountability, availability, and affordability. It also helps organizations build employee trust and ease fears about returning to the workplace.

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The Challenge of Going Back to the Workplace

Consider the landscape. To slow the spread of the virus, many employees, academic staff, and students were required to go into lockdown. Essential business was able to continue, but under severe constraints. As economies re-open, employers need to get employees and others back to the workplace and strive for a near-normal operating state. A number of large employers were quick to step up and announce plans:

- Automaker Ford introduced testing for the presence of the active virus at locations in Michigan, Kentucky, Missouri, and Illinois as it rushed to get 12,000 of its workers back into plants by mid-May.
- According to news reports, Amazon plans to test the bulk of the company's warehouse workers every two weeks, using nasal swabs under the guidance of clinical professionals.

AN INTEGRATED APPROACH TO DATA MANAGEMENT

Designed to streamline and track large, complex amounts of scientific data, laboratory information management systems (LIMS) revolutionized the way research findings flowed in the early 1980s.

Automating repetitive, manual tasks saved money and allowed labs to focus on the important work of moving science forward. As computing power exploded and the cost of storage shrank, LIMS became increasingly flexible, essential, and affordable.

As an industry leader in LIMS technology, LabVantage Solutions has developed tools and approaches that continually push the data revolution behind new discoveries—making scientific work more cost efficient and manageable.

- In the hard-hit airline industry, Delta announced its intention to roll out a protocol for testing both viral loads and antibodies.

For colleges and universities, the challenge is even greater. Not only do administrators have to worry about the proximity of students, faculty, and staff as they move around campuses, but there are social gatherings and shared residences to consider, as well. Faced with those issues, in early June several presidents of post-secondary institutions told members of the US Senate committee on Health, Education, Labor, and Pensions that their campuses would remain closed until they could perform testing and contact tracing for all students. Without adequate testing, said Dr. Georges Benjamin, president of the American Public Health Association, universities cannot function at all. Throughout the academic community, concern is running high that the combination of testing and reluctant students will further stress budgets that are already stretched thin.

One of the primary issues with implementing testing is finding a source that can provide the accuracy and reliability mandated by the US Food and Drug Administration (FDA) and the Centers for Disease Control and Prevention (CDC). Ford, for example, signed separate agreements with four different sources: Beaumont Health in Michigan, the University of Louisville Health in Louisville, Kentucky, Liberty Hospital in the Kansas City area, and the University of Chicago Medical Center and UChicago Medicine-Ingalls Memorial Hospital in the Chicago area. According to a CNN report, the testing procedure varies between locations. For example, in Louisville symptomatic employees must schedule a telemedicine appointment with a doctor, while in Kansas City employees must get a prescription from a workplace-based physician and then go to a drive-through testing facility.

Consistency of the testing is a challenge throughout the US, and organizations like the Electronic Frontier Foundation raised issues regarding the protection of individuals' privacy in the rush to put COVID-19 testing in place. In a paper presented to the US Senate committee on Commerce, Science, and Transportation in April, Senator Maria Cantwell (D-Washington) noted: "Rights and data surrendered temporarily during an emergency can become very difficult to get back."

Meeting the Need for Speed

LabVantage's informatics solution for COVID-19 testing addresses the issues of quality control, cost, security, and timing, based on the company's strong reputation for transforming scientific data into knowledge that drives better outcomes for its business partners and the global community.

The company's CEO, John Heiser, said: "We mobilized our decades of expertise to rapidly deliver a new purpose-built LIMS to support COVID-19 testing and research. It incorporates our deep knowledge of biobanking biological specimens and data management for diagnostic testing, along with numerous features designed to make it easy for laboratories to acquire, implement, and use the most powerful LIMS on the market for their COVID-19 testing."

From the diagnostic perspective, LabVantage's informatics platform handles request management, next-generation sequencing workflows, consumables management, and controls the reporting process. The platform automatically captures a complete, GxP-compliant audit trail in accordance with data integrity guidelines from the FDA, including changes in temporary data (entries made before saving). And because it interfaces directly with lab instrumentation, the platform replaces most manual data entry processes, reducing the risk of human error.

While the LabVantage COVID-19 LIMS can be hosted on-premise or in the cloud, a SaaS deployment helps users conserve capital budgets because they only pay for what they use,

INCREASE YOUR LAB'S PRODUCTIVITY

Utilizing a zero footprint client, LabVantage is able to offer a LIMS platform that requires no customization, and needs only a web browser to use.

In addition, LabVantage's comprehensive approach to streamlining lab data integrates its LIMS with capabilities for an electronic laboratory notebook, a laboratory execution system, and a scientific data management system. Embedding those capabilities into the LIMS maintains a consistent user experience and limits the need to manage a stack of solutions from multiple vendors.

As a result, customers enjoy the benefits of robust and flexible storage options, simplified data management with fewer bottlenecks, and enforced data integrity. It all adds up to increased lab productivity.

and the annual subscription fee provides access to the full LabVantage platform—which includes the LIMS, biobanking, workflows and methods, consumables management, barcode labeling software, start-up training, and ongoing support.

Based on a study conducted in early 2020, a subscription-based SaaS LIMS could produce a saving of as much as 32 percent compared with the expense of an on-premise solution. A subscription-based solution can also be the ideal answer to a limited-time situation like pandemic testing, offering the advantage of scalability, flexibility, and ease of adoption.

Along with cost efficiency and flexibility, LabVantage SaaS offers several other benefits:

- Increased productivity with global availability
- Elimination of outdated software
- Instant scalability to meet business demand
- Less downtime
- Streamlined software licensing
- Built-in disaster recovery
- Data integrity

For those organizations that have fully embraced cloud storage, LabVantage COVID-19 LIMS offers the stability of being hosted through the company's partnership with Amazon Web Services or any other cloud hosting company, along with a number of other benefits:

- No hardware purchases
- Accelerated setup and installation
- Flexible memory, disk space, number and speed of processors
- Built-in disaster recovery
- Global availability
- On-demand availability for short-term use
- Flexible server management
- Easy modification for specific, emerging requirements

Privacy Assured

LabVantage's solution offers complete electronic patient record tracking for COVID-19 testing, with pre-configured templates and forms, including eConsent support. This helps ensure that CDC-mandated patient metadata can be easily tracked, along with risk and symptom indicators, physician prescription and record, an electronic case record, and other forms.

Built-in audit trails and workflows make all data ALCOA+ compliant and ensures data integrity.

Security protocols and permissions are highly configurable, with sensitivity toward context, patient, and study anonymization, ensuring that employee or student data is protected to meet the requirements set out by the US Health Insurance Portability and Accountability Act and the EU's General Data Protection Regulation.

As noted, perhaps the greatest challenge facing organizations searching for certainty amid tremendous upheaval is timing. How fast can we get back to the workplace? How quickly can we assure our customers, shareholders, students, et.al., that life is returning to some kind of normalcy? Because the LabVantage solution is pre-configured, minimal implementation time is needed, with a go-live possible in weeks.

A Solution That Scales

From top to bottom, LabVantage COVID-19 LIMS offers maximum flexibility, designed to fit the needs of organizations of any size. For large enterprises, with the capacity to leverage their own in-house testing, the LIMS can fit into existing workflows, protocols, and health and safety programs. Smaller organizations that lack the resources for in-house testing can easily integrate the LabVantage platform with third-party laboratories without sacrificing any of the advantages of scope or scale.

Whether the need is to get employees safely back into centralized workplaces or assure students and their parents, faculty, and staff that it is safe to be on to campus, LabVantage's full-featured, pre-configured COVID-19 LIMS can provide the confidence that accompanies accurate and comprehensive testing.

TO TRANSFORM YOUR DATA INTO KNOWLEDGE that can confidently drive safe COVID-19 workplace and campus health decisions, rely on LabVantage COVID-19 LIMS. Let us show you how quickly this robust, full-featured COVID LIMS can be up and running. Request a demo at fbassillo@labvantage.com.



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ABOUT LABVANTAGE SOLUTIONS

A recognized leader in enterprise laboratory software solutions, LabVantage Solutions dedicates itself to improving customer outcomes by transforming data into knowledge. The LabVantage informatics platform is highly configurable, integrated across a common architecture, and 100% browser-based to support hundreds of concurrent users. Deployed on-premise, via the cloud, or SaaS, it seamlessly interfaces with instruments and other enterprise systems – enabling true digital transformation. The platform consists of the most modern laboratory information management system (LIMS) available, integrated electronic laboratory notebook (ELN), laboratory execution system (LES), and scientific data management system (SDMS); and, for healthcare settings, a laboratory information system (LIS). We support more than 1500 global customer sites in the life sciences, pharmaceutical, medical device, biobank, food & beverage, consumer packaged goods, oil & gas, genetics/diagnostics, and healthcare industries. Headquartered in Somerset, NJ., with global offices, LabVantage has, for four decades, offered its comprehensive portfolio of products and services to enable customers to innovate faster in the R&D cycle, improve manufactured product quality, achieve accurate record-keeping, and comply with regulatory requirements.

For more information, visit www.labvantage.com.