Evaluating LIS ROI in a physician office laboratory

Creating operational, clinical, and strategic value through connected testing

Published: October 2026

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Executive summary

POLs must manage testing operations alongside staffing, reimbursement, workflow, and patient-experience considerations. As practices evaluate technology investments, the value of a laboratory information system (LIS) should be considered in broader terms than software cost alone.

A modern LIS can help connect workflows, laboratory data, instruments, electronic health records (EHRs), reference laboratories, and reporting processes. Connected infrastructure may give practices a framework for evaluating workflow activity, access to laboratory information, reimbursement-related processes, follow-up workflows, and plans for service expansion.

For a POL, LIS return on investment (ROI) can therefore be evaluated across four connected dimensions:

- Operational value: identifying opportunities to reduce manual effort and supporting consistent workflows.
- Patient care value: evaluating how configured workflows make laboratory information available to authorized users across the testing process.
- Growth value: helping the practice expand testing services and locations while managing operational demands.
- Strategic value: evaluating how connected laboratory information may support earlier action, continuity workflows, and a sustainable role for in-practice testing.

This paper provides a practical framework for evaluating these areas of value and considering how connected laboratory infrastructure can support both immediate operational needs and longer-term practice goals.

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1 The business case for connected testing

For many POLs, the decision to invest in an LIS is closely connected to a larger question: how can the practice bring more testing into the flow of care while keeping operations manageable for lean teams?

In-practice testing may change where orders, specimens, results, and related information move within the care process. Practices can evaluate whether this model fits their clinical and operational workflows. However, expanding testing can also introduce new demands related to staffing, workflow coordination, billing, quality processes, instruments, reference-laboratory activity, and data management.

An LIS can provide a connected operational foundation for addressing these demands. Rather than evaluating the system as a stand-alone technology purchase, practices can assess how it supports the clinical, operational, and business model they want to build.

The most meaningful ROI question is not only “What does the LIS cost?” It is “What can the practice sustain, improve, or expand with connected laboratory infrastructure?”

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A broader framework for LIS ROI

Traditional ROI calculations may focus primarily on direct costs and labor savings. Those measures remain important, but they may not capture the full value of an LIS in a physician practice. A more complete evaluation considers how technology affects operations, patient care, growth, and long-term adaptability.

ROI dimension	What to evaluate
Operational value	Manual data entry, routine task automation, workflow standardization, turnaround support, reporting efficiency, and staff attention directed to work requiring review or expertise.
Patient care value	Timely result availability, access to current and historical laboratory information, fewer information handoffs, follow-up support, and continuity across the patient journey.
Growth value	The ability to support expanding test menus, point-of-care testing, referred testing, additional locations, or changing service requirements without a comparable increase in administrative complexity.
Strategic value	Connected information that can support recurring monitoring, earlier action, more proactive care, and the practice's ability to keep more of the testing journey connected in one place.

Operational value: Making use of available capacity

POL teams often manage testing alongside a broad range of administrative, quality, reporting, and coordination activities. When information must be re-entered, reconciled, or tracked across disconnected systems, staff capacity can be consumed by work that does not require laboratory expertise.

When evaluating operational ROI, practices should assess where connected workflows and automation may reduce avoidable manual activity. Areas to consider include:

- Electronic transmission of orders and results between the EHR and LIS
- Instrument and reference-laboratory connectivity
- Rules-based routing, follow-up, and workflow management
- Barcode-enabled accessioning and collection workflows
- Consolidation of in-house and referred testing information
- Automated report delivery through configured communication channels
- Operational reporting and visibility into testing activity

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The objective is not simply to automate more tasks. Practices can examine how staff time is distributed across data entry, reconciliation, workflow coordination, technical review, quality oversight, and patient-care support.

Patient care value: Supporting a connected testing experience

Operational considerations can be assessed alongside the workflows that follow laboratory testing, including review, communication, and follow-up. For a POL, timely access to laboratory information can support clinical decision-making, follow-up activities, and coordinated workflows from order through result review.[1]

Connected laboratory information may help practices address information fragmentation. Where configured data sources are connected, authorized users may be able to view current and historical laboratory information within established workflows. This information may inform review across visits and recurring monitoring activities.[2]

Practices evaluating LIS ROI should therefore consider questions such as:

- How efficiently do orders, specimens, results, and follow-up activities move across laboratory and clinical workflows?
- Can authorized users access current and historical laboratory information within connected workflows?
- Does the operating model reduce unnecessary handoffs or duplicate information management?
- Can the practice support timely result delivery as testing demand changes?
- Does the laboratory infrastructure help keep more of the testing journey connected within the practice?

Growth value: Expanding testing without expanding complexity

Growth can create value for a practice, but it can also introduce operational burden. New test menus, instruments, point-of-care programs, referred testing relationships, practice locations, and reporting requirements may each add workflow and data-management demands.

Practices can assess whether an LIS configuration accommodates planned changes in test menus, instruments, referred testing, locations, and reporting requirements. The assessment can include changes in manual work, workflow governance, and information visibility.

Potential areas of evaluation include:

- Support for additional instruments and connected systems
- Standardized workflows across sites or testing programs
- Management of in-house and referred testing
- Visibility into operational activity and performance trends
- Support for evolving reporting and quality requirements
- The ability to add services without creating separate, fragmented processes

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Strategic value: Supporting longitudinal testing workflows

The value of laboratory information extends beyond a single result. As practices support preventive screening, chronic disease management, and recurring patient monitoring, connected data may provide a longitudinal view of available testing activity.[2] Practices can evaluate how that information fits established follow-up, monitoring, and continuity workflows.

An LIS does not make clinical decisions. It can help organize and make laboratory information accessible within defined workflows, reducing reliance on disconnected sources and manual information gathering. For practices seeking to move care closer to the patient and support more proactive health management, strategic ROI may include a stronger information foundation for follow-up, ongoing monitoring, and continuity across visits.[3]



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2 Decision support for consistent POL workflows

Configurable, rules-based functionality can help POLs support consistent workflows throughout the testing process. By applying laboratory-defined rules to predefined processes, an LIS can help guide routine activity and direct staff attention to work requiring review or technical expertise.[3]

Examples may include:

- Identifying orders that require additional review or follow-up
- Routing tests according to laboratory-defined requirements
- Supporting required documentation within established processes
- Applying configured decision-support and workflow rules
- Consolidating instrument and reference-laboratory results
- Delivering reports through EHR integrations and other configured channels

When evaluating these capabilities, the practice should connect each feature to a defined operational objective rather than treating functionality alone as evidence of value.

Building an LIS ROI baseline

An ROI evaluation is more useful when it begins with the current state. Before implementation or expansion, practices can document the processes they want to improve and the measures they already use to manage laboratory operations.

A baseline may consider:

- Time spent on repetitive data entry, reconciliation, result routing, and information gathering
- Frequency of manual handoffs across the EHR, laboratory, reference-laboratory, and billing workflows
- Turnaround and follow-up processes used by the practice
- Testing volumes, test-menu changes, and anticipated service expansion
- Current reporting, quality documentation, and activities used to prepare for inspections
- Operational measures such as productivity, quality indicators, and test utilization that the organization already monitors

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The practice can then determine which changes are meaningful to its goals and which measures can be evaluated consistently. Actual value and outcomes will vary by organization, workflow design, implementation, and use of the system.

A practical ROI framework connects technology capabilities with defined workflows, measurable baselines, and the practice's operational priorities.

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3 How Clinisys™ Orchard® can support the value framework

Clinisys™ Orchard® is a configurable, web-based LIS designed to support connected testing operations across POLs and other laboratory settings. The solution supports workflow management, analyzer connectivity, EHR integration, point-of-care testing programs, reporting, and data visibility.

Depending on the practice's requirements and configured workflows, these capabilities may support:

- Standardized and automated laboratory workflows
- Connectivity across instruments, EHRs, reference laboratories, and other systems
- Reduced dependence on duplicate data entry and manual handoffs
- Reporting, analytics, and operational visibility
- Billing-related and administrative workflows
- Quality-management activities and documentation
- Expansion of testing services and practice operations

Clinisys also provides implementation, training, and ongoing support services to help organizations align the solution with their operational goals.

Turning LIS investment into sustainable value

For a POL, LIS ROI should not be limited to a software-cost comparison or a single efficiency measure. A connected LIS can help the practice coordinate workflows, use staff capacity effectively, provide access to laboratory information, and prepare for evolving testing needs.

The strongest business case connects operational improvements to the outcomes the practice is working to achieve: a more manageable laboratory environment, a more connected patient experience, sustainable growth of in-practice testing, and better support for ongoing care.

By evaluating operational, patient care, growth, and strategic value together, POL leaders can build a more complete view of how laboratory infrastructure supports both today's requirements and the future role of testing within the practice.

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About Clinisys™ Orchard®

Clinisys™ Orchard® is a configurable, web-based LIS designed to support workflows across clinical, pathology, molecular, microbiology, toxicology, outreach, and point-of-care laboratory environments.

Built on a SQL-based architecture, the solution provides configurable workflows, integration capabilities, reporting and analytics tools, and decision-support features to help laboratories manage complex operational requirements. By bringing together laboratory data, instruments, and healthcare systems within a connected environment, Clinisys Orchard can support efficiency, quality objectives, and evolving operational and regulatory needs.

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Reach us via Info-US@Clinisys.com

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Clinisys
3300 E Sunrise Dr.
Tucson, AZ 85718

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Telephone: (877) 239-6337 | Email: Info-US@Clinisys.com

Clinisys™ history

For more than 45 years, Clinisys™ has continuously evolved how laboratories operate—supporting over 7,000 laboratories across 42 countries in delivering critical insights that help enable healthier and safer communities around the world.

Clinisys serves laboratories across healthcare, scientific, life sciences, and public health testing—where precision, reliability, and adaptability are essential to improving outcomes, quality of life, and protecting public safety.

Scaling with the laboratory

As laboratory environments have grown more complex, Clinisys has expanded its platform to support increasingly interconnected, data-driven operations across industries and geographies. Today, laboratories rely on Clinisys to manage not only workflows and data, but also the growing need for coordination across systems, stakeholders, and processes.

Driving continuous innovation

Clinisys has consistently advanced laboratory informatics by rethinking how systems are built and evolve—moving beyond static implementations toward platforms that can adapt alongside changing scientific, operational, and regulatory demands.

This evolution reflects a broader shift in the industry: from systems designed to manage laboratories, to platforms designed to help labs continuously improve how they operate.

Looking to the future

Today, Clinisys is extending this vision through cloud-based, scalable, SaaS platforms that enable laboratories to operate beyond physical boundaries—connecting workflows, data, and decision-making across environments.

By incorporating advanced data capabilities and intelligent orchestration, Clinisys is helping laboratories move toward more adaptive, insight-driven operations—where systems evolve in step with the needs of the laboratory.

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