

A PRACTICAL GUIDE FOR CLINICS

The POCT Connectivity Buyer's Guide.

How point-of-care results actually reach the record, the standards behind it in plain English, the hidden cost of doing it by hand, and the eight questions that separate a real connectivity platform from a nice-looking demo.

WHO IT IS FOR

POCT leads, clinic managers and practice owners choosing how their analyser results reach the patient record.

WHAT IT IS

A vendor-neutral, honest guide: the arithmetic is illustrative, the standards are explained, and every claim is hedged where it should be.

HOW TO USE IT

Read it once. Then take the eight questions and the readiness checklist into any vendor conversation, ours included.

The last step is where clinics lose the day.

Point-of-care testing is genuinely fast at the bench. A result appears in seconds. Then it has to reach the systems the clinic actually runs on, and that is where the time goes: values read off a handheld and typed in again, quality control living in a spreadsheet, audit evidence scattered across folders. This guide is about that last step, and how to buy for it well.

WHAT IS INSIDE

01	What POCT connectivity actually is	And why the last step is the expensive one
02	The standards in plain English	HL7 v2, POCT1-A2, ASTM, FHIR, and "bidirectional"
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A NOTE ON HONESTY

This is published by Catenix, so we have a horse in this race. We have tried to earn your trust by writing the guide we would want to read: the standards section works for any vendor, the eight questions are neutral, and the one place we describe our own approach is clearly labelled as a sidebar. Every figure is either illustrative or cited to a named public source. There are no invented customer counts in these pages.

What POCT connectivity actually is.

Point-of-care testing means running a diagnostic test next to the patient rather than sending a sample away to a central lab. Connectivity is the plumbing that carries that result from the analyser into the places it needs to live: the patient record, the quality log, the report, and sometimes a laboratory or hospital system beyond your walls.

The three-step journey

Capture. A result is produced on the device. On a networked analyser it can be read electronically. On a handheld it may only be on a screen until someone acts on it.

Carry. The result travels somewhere useful: attached to the right patient, timestamped, with the operator and device recorded. This is the step people underestimate.

Land. The result comes to rest in a record a clinician can review, sign and act on, and from there into reports, quality evidence and any onward system.

IN ONE LINE

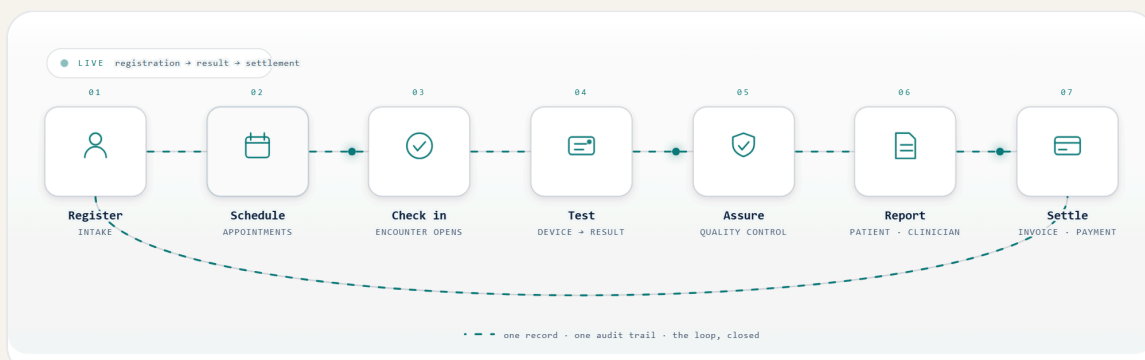
Connectivity is not the test. It is everything that happens to the result after the test, and it is the part clinics buy badly because it is invisible until it goes wrong.

The buyer's trap: most POCT buying attention goes to the analyser and its consumables. The connectivity layer is chosen last, or assumed, and it is the layer that decides whether the clinic runs smoothly for the next five years.

Where the day slows down

Capture is fast. Landing is where clinics quietly lose time, because in many setups the "carry" step is a human: someone reads a value off a handheld, walks to a computer, finds the patient, and types it in. Every one of those hops is a chance to attach the value to the wrong patient, transpose a digit, or lose the record of who did what and when.

Good connectivity removes the human from the carry step, not from the judgement. The clinician still reviews and authorises. The typing simply stops.



The result travels along one thread: analyser, to record, to report, to any onward system, without being retyped.

The standards, in plain English.

Connectivity runs on a small number of messaging standards. You do not need to implement them, but knowing what each one is for lets you ask a vendor sharper questions and tell a real answer from a vague one.

HL7 v2	The long-standing language of clinical messaging. A result travels as a message (an ORU) that says who the patient is, what was tested and what came back. Most laboratory and hospital systems speak it. If a result needs to reach a wider record, HL7 v2 is usually how.
POCT1-A2	The standard written specifically for point-of-care devices and the data manager that sits between them and the wider record. It is designed for the handhelds and bench analysers a clinic actually runs, and it covers not just results but device status, operator identity and quality-control data.
ASTM	An older instrument-to-computer standard still spoken by a large installed base of analysers, often over a serial or simple network link. Plenty of perfectly good devices talk ASTM and nothing newer, so a connectivity layer that has quietly dropped it will leave part of your bench stranded.
FHIR	The modern web-style standard, built on the same ideas as ordinary web services. It is where newer record systems are heading, including national records. A platform that can present results as FHIR is ready for that direction of travel without re-plumbing everything.

What "bidirectional" means, and why it matters

One-way (unidirectional) connectivity carries results out of the analyser and into the record. That alone removes most of the retyping, and for many clinics it is enough.

Two-way (bidirectional) connectivity also sends information back down to the device: an order or worklist so the analyser knows what to run, an operator list so only trained staff can test, or a lockout that stops a device after failed quality control. This is where connectivity stops being a pipe and starts being control.

Ask a vendor which direction they mean. "We are connected" often means results come out. Whether anything useful goes back in is a separate, and more revealing, question.

HOW CATENIX APPROACHES THIS

Speak all three, plus FHIR

Catenix provides bidirectional connectivity over HL7 v2, POCT1-A2 and ASTM, with a FHIR R4 API for onward delivery, and protocol support across around 51 analyser families. A small on-site gateway captures results automatically and, where a device supports it, can push operator lists and lockouts back down. Results can be forwarded onward to a LIS, EHR or the wider record.

The hidden cost of disconnection.

Disconnection rarely shows up as a line on a budget. It shows up as time, small errors, and revenue that quietly leaks. Here is where it hides, with the one number worth knowing and a worked example you should replace with your own figures.

RE-KEYING

Every result read off a device and typed in again is unpaid handling time, repeated for every test, every day.

TRANSCRIPTION ERROR

Manual entry transposes digits and mismatches patients. Each slip costs time to catch, or trust when it is missed.

~3.7%

An estimated error rate for manual result entry reported in a peer-reviewed study of point-of-care data handling. Applied to a busy bench, a few percent of entries carrying an error is not a rounding detail: it is the reason a value has to be double-checked before anyone can trust it.

QC TIME

Quality control kept in a spreadsheet is re-entered, chased, and rebuilt from scratch whenever an assessor asks.

MISSED BILLING

Tests that never reach a system are hard to invoice for. Disconnection leaks revenue at the far end, not just time at the front.

Source: Mays JA and Mathias PC, 2019, *Journal of the American Medical Informatics Association (JAMIA)*. Cited here for illustration; your own environment and devices will differ.

AN ILLUSTRATIVE WALK-THROUGH (REPLACE WITH YOUR OWN FIGURES)

Take a clinic that records 120 point-of-care results a day. Suppose each result takes roughly a minute to read, find the patient and key in. That is around two hours of handling time a day spent moving numbers that a connected setup would move on its own. Separately, if a few percent of manual entries carry a transcription error, that is a handful of values every day that must be caught and corrected before the result can be trusted.

These numbers are illustrative and deliberately round. The point is not the total, it is the shape: the cost of disconnection is continuous, it compounds with volume, and none of it appears on an invoice. Put your own result volume, staff cost and error tolerance into the same three lines before any vendor conversation.

What good looks like.

Beyond simply moving results, a connectivity setup you will be glad you chose gets five things right. Use these as a mental model when you watch any demo: if a vendor cannot show you all five, you are looking at a pipe, not a platform.

1. QC kept separate from patients

Quality-control runs are captured and stored apart from patient results, then rule-checked. Mixing the two is how bad evidence and bad results contaminate each other.

3. Operator competency, visible

The system knows who is certified to run what, flags expiries before they bite, and can stop an untrained or lapsed operator from testing. Competency you can prove, not competency you assume.

5. Onward delivery that is ready

Results can be forwarded to a LIS, an EHR or the wider record when you need it, over the standards those systems speak, so you are not stranded the day a referral partner asks for a feed.

2. A tamper-evident audit trail

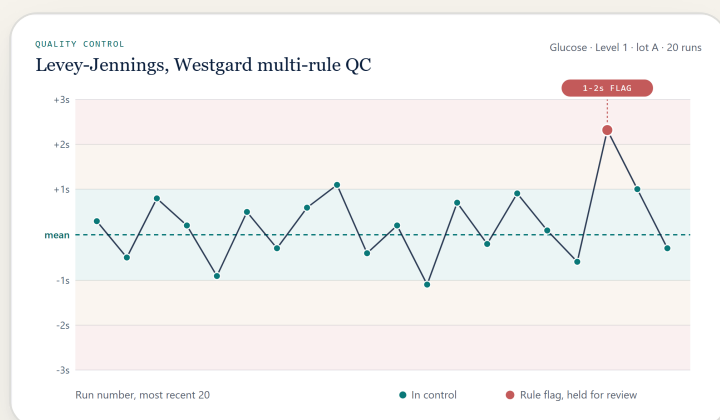
Every login, edit, review and release recorded against the person who did it, in a form that cannot be quietly altered after the fact. This is what an assessor actually asks to see.

4. Review and sign before release

No patient report leaves the building until a clinician has reviewed and signed it. Connectivity should speed the clinician up, never route around the clinician.

The thread that ties them

The same result carries one identity from bench to signed report, so quality, audit and delivery all describe the same event rather than three re-typed copies of it.



HOW CATENIX APPROACHES THIS

Evidence that builds itself

In Catenix, QC is captured separately and rule-checked on Levey-Jennings charts with Westgard multi-rules, a lockout engine can stop a device after failed QC, operator competency populates itself from device traffic where devices transmit operator identity, and a mandatory review-and-sign gate holds every report until a clinician signs. The audit trail is tamper-evident. The evidence an assessor asks for already exists.

The eight questions to ask any vendor.

Neutral by design. Ask these of every vendor you consider, including us. The value is in listening for a specific answer over a smooth one.

1 Which of my exact devices do you support today?

Not a category, the specific analysers on your bench, by model.

Listen for: model names and the standard each speaks.

2 Is it one-way or two-way to those devices?

Results out is common. Orders, operator lists and lockouts back in is rarer.

Listen for: which direction, per device, not in general.

3 How is quality control handled and kept separate?

QC apart from patient results, rule-checked, with a lockout when it fails.

Listen for: named rules and where the evidence lives.

4 What does your audit trail actually record?

Who did what, when, and whether it can be altered afterwards.

Listen for: tamper-evidence and named actors.

5 How do results reach my record, and onward?

The path into your patient record, and out to a LIS, EHR or wider record.

Listen for: HL7, POCT1-A2, ASTM or FHIR, named.

6 Where does my data live, and who can reach it?

Hosting region, encryption, access control and how tenants are separated.

Listen for: data residency and role-based access.

7 How long from contract to first traced result?

The honest timeline to a live, connected result, not the sales estimate.

Listen for: days or weeks, with what it depends on.

8 How am I priced, and what happens as I grow?

Per clinic, per test, per device, and what a second site costs.

Listen for: a model you can predict a year out.

One rule for reading the answers: a strong vendor answers question one with your actual model names and gets more specific from there. A weak vendor stays general and gets more general. Specificity is the signal.

Your one-page readiness checklist.

Print this page. Tick what you can answer today. The gaps are your agenda for the first vendor call.

KNOW YOUR BENCH

- ☐ We have a **list of every analyser** by model, and know which standard each speaks.
- ☐ We know **how many results a day** pass across the bench.
- ☐ We know which results are **keyed in by hand** today, and by whom.

KNOW YOUR QUALITY PICTURE

- ☐ Our **QC lives somewhere** we could show an assessor this week.
- ☐ We can say **who is certified** to run each device, and when it expires.
- ☐ Every released report passes a **review-and-sign step** today.

KNOW YOUR DESTINATIONS

- ☐ We know **which record** results need to land in.
- ☐ We know if any **onward system** (LIS, EHR, referral partner) needs a feed.
- ☐ We know our **data-residency and access** requirements.

KNOW YOUR CONSTRAINTS

- ☐ We have a **target go-live** and know what depends on it.
- ☐ We know how many **sites** this needs to cover, now and next year.
- ☐ We have a **pricing model** we can predict as volume grows.

WHEN YOU ARE READY

See results landing in the record.

Bring your analyser list and this checklist. We will show results landing in the record, live, in a 30-minute walkthrough tailored to the devices you run.

[Book a demo →](#)catenix.com/contact

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