Lab Orders & Results Integration Checklist

One page to scope the lab layer of a telemedicine product: the order/result loop, the standards, the coding, the BAA boundary, the immediate-release rule, and the build-vs-aggregator call. Engineering guidance, not legal advice — confirm specifics with counsel.

1 · THE ORDER / RESULT LOOP

- [ ] Order out: patient, test, ordering clinician, collection site
- [ ] Result back: value, unit, reference range, abnormal flag
- [ ] Match every result to its original order AND patient
- [ ] Land the result in the same consult and record it came from

2 · STANDARDS — FHIR & HL7 v2

- [ ] FHIR order = ServiceRequest; result = DiagnosticReport + Observation
- [ ] DiagnosticReport.basedOn links the result back to the order
- [ ] Legacy HL7 v2: OML order, ORL ack, ORU^R01 result (and old ORM)
- [ ] Budget for BOTH — much of the real lab network is still HL7 v2

3 · CODING — LOINC / UCUM / SNOMED

- [ ] LOINC names the test (what was measured) — required for certified exchange
- [ ] UCUM standardizes the unit on numeric values
- [ ] SNOMED CT codes word results (positive / negative / detected)
- [ ] Insist on discrete coded results — a PDF cannot be flagged or trended

4 · PHI & THE BAA BOUNDARY

- [ ] A test name + a patient = Protected Health Information (PHI)
- [ ] Lab, aggregator, and result store are all business associates
- [ ] Sign a BAA with each before any real result moves
- [ ] "Encrypted" is not "compliant" — the BAA is the permission to send

5 · RESULT RELEASE (2021 RULE)

- [ ] Default: release to patient AND clinician in parallel, immediately
- [ ] Information-blocking rule applies to providers since 2021-04-05
- [ ] Critical values: immediate clinician alert (CLIA 42 CFR 493.1291)
- [ ] Delay only under the narrow, documented Preventing-Harm exception

6 · BUILD vs BUY

- [ ] Direct per lab: weeks-to-months each, yours to maintain forever
- [ ] Aggregator (e.g. Health Gorilla): one FHIR API, hundreds of labs
- [ ] Through the EHR: the host record owns the lab interfaces
- [ ] Confirm BAA, lab coverage, and structured-result support per partner

THE ONE-LINE RULE

A telemedicine lab feature is a loop — a structured order out and a coded result back into the consult and record — carried by FHIR (ServiceRequest to DiagnosticReport plus Observation) or legacy HL7 v2 (OML to ORU), and only useful when every result is coded with LOINC for the test, UCUM for the unit, and SNOMED CT for word answers, so your app can actually flag, trend, and search it. The whole flow is PHI, so the laboratory and every routing vendor need a signed BAA before a single real result moves, and since April 5, 2021 the information-blocking rule means results generally reach the patient the moment they post — design for the patient seeing the number first, route critical values to a real-time clinician alert, and reserve any delay for the narrow Preventing-Harm exception. Reach Labcorp and Quest through a BAA-covered aggregator instead of building an interface to every lab, and treat the lab layer as a compliance and data-quality problem before an engineering one.