EHR IMPLEMENTATION

Stage-by-Stage Walkthrough

Real-World Scenarios · Use Cases · Hands-On Projects

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Running Scenario throughout this guide: Lakewood Family Health — a 3-clinic primary care network implementing Epic EHR. 42 providers, 91 total staff, 16-week go-live timeline. You are the EHR Analyst.

STAGES COVERED IN THIS GUIDE

Stage	Topic	Weeks
01	Workflow Analysis, Documentation, Gap Analysis & Design Specs	1–4
02	UAT & Scenario-Based Testing	8–12
03	Training Design & Delivery (Virtual and In-Person)	10–14
04	Stakeholder Communication & Status Reporting	Ongoing
05	Change Management Processes	Ongoing
06	End-User Support & Issue Resolution	14+
07	Working with Interoperability & Integration	4–12

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STAGE 01 · Workflow Analysis, Documentation, Gap Analysis & Design Specs

This is where the implementation is won or lost. Every build decision downstream depends on the quality of what you capture here. Weeks 1–4 of a typical project.

THE FOUR OUTPUTS OF THIS STAGE

Current-State Workflow	Future-State Workflow
• A flowchart of exactly how the clinic operates today • Every step, person, system, and piece of paper • This is your baseline — you cannot fix what you have not mapped • Produced during and immediately after observation sessions	• The proposed workflow after Epic goes live • Drawn after stakeholder validation — never before • Differences from current state must be explicitly marked • Clinical staff sign off before build begins

Gap Analysis	Design Specifications
• Side-by-side comparison of current vs. future state • Documents what is changing, eliminated, new, or at risk • Includes Risk Level (High/Med/Low) and Mitigation for each gap • This is your project risk register in workflow form	• The technical blueprint for what gets built in Epic • Field names, data types, logic rules, order routes, security roles • This is what the builder works from — it must be precise • Produced after clinical stakeholder sign-off on future state

REAL-LIFE SCENARIO 1A — WORKFLOW OBSERVATION

You observe a workaround during check-in at Clinic 2

During workflow observation, you watch an MA open a separate spreadsheet on a second monitor to manually check insurance status before entering it in the PM system. This contradicts the documented process (PM system eligibility check).

Why this matters: Workarounds reveal where the current system fails clinicians. This spreadsheet exists because the PM eligibility check is unreliable — failing approximately 30% of the time. She built her own solution.

What you do:

- Document the workaround in your current-state flowchart — not the documented process, the actual process
- Ask: How long have you been using this spreadsheet? Who else does this? How often does the PM check fail?
- Add to gap analysis: 'Current eligibility verification unreliable — manual workaround in use across 3 MAs'
- Add to design specs: 'Epic eligibility integration must return results in <5 seconds — validate with clearinghouse before go-live'
- Flag for clinical informaticist: this workflow must improve at go-live, not just migrate

REAL-LIFE SCENARIO 1B — GAP ANALYSIS

Three physicians want to keep paper encounter forms after go-live

During workflow validation, three physicians say they will keep using paper forms and enter notes later. This is a major gap and a patient safety risk. Here is how you document it:

Field	Content
Gap ID	WF-014
Current State	Providers document on paper, MA transcribes to legacy system at end of day
Future State	Providers document directly in Epic at point of care or within 24 hours
Affected Users	3 of 14 providers at Clinic 2
Risk Level	HIGH — affects charge capture, CDS accuracy, care team communication, compliance
Mitigation	Physician champion engagement, individualized training, SmartPhrase library build, supervisor escalation if non-compliant post go-live
Target Date	Resolved before go-live

REAL-LIFE SCENARIO 1C — DESIGN SPECIFICATIONS

Writing a field-level design spec for the nursing assessment flowsheet

The nursing team requests a flowsheet for pre-visit assessment. You must write a precise design spec before any builder touches Epic. Vague requests create rework — specific specs create clean first builds.

Flowsheet Row	Data Type	Validation / Logic	Required?
Temperature	Numeric — °F	Range: 95.0–108.0	Yes
Blood Pressure	Systolic/Diastolic pair — mmHg	Systolic must be > diastolic or warning fires	Yes

Heart Rate	Numeric — bpm	Range: 30–250	Yes
Pain Scale	SmartList (0–10)	Numeric scale display	Yes
Reason for Visit	Free text	None	Yes
Fall Risk Screen	SmartList (Low/Mod/High)	Required only for patients 65+ (DOB conditional logic)	Conditional
PHQ-2 Q1 + Q2	SmartList (4 options each)	Score auto-calculated; if ≥3, trigger PHQ-9 prompt	Yes
Tobacco Use	SmartList (Never/Former/Current)	If Current: display cessation resource SmartLink	Yes

PRACTICE PROJECT P1

Build a Complete Workflow Package for Patient Check-In

Using the Lakewood Family Health scenario, create a complete workflow analysis package for patient check-in, as if submitting it to a clinical informatics lead for sign-off.

- Draw a current-state flowchart for new patient check-in with swim lanes: Patient / Front Desk / MA / EHR System
- Draw a future-state flowchart showing the same process in Epic with changes marked
- Write a gap analysis with at least 5 rows, each with Risk Level and Mitigation
- Write a design spec for one component (insurance verification or demographics update screen)
- Write 5 stakeholder interview questions to validate the future state with the front desk team

DELIVERABLES

Current-State Flowchart · Future-State Flowchart · Gap Analysis (5+ rows) · Design Spec · Stakeholder Questions

STAGE 02 · UAT & Scenario-Based Testing

Testing is your last line of defense before real patients are affected. Your job is to break your own build before a clinician does. Weeks 8–12 of a typical project.

THE THREE TESTING LAYERS

Type	What It Tests	Who Executes	Gate
Scenario-Based	Specific end-to-end clinical stories with defined inputs and expected outputs	Analyst team	Required before integrated testing
Integrated	How your module interacts with adjacent systems — lab, pharmacy, radiology, billing	Analyst + IT + vendor	Required before UAT
UAT (User Acceptance)	Clinical super-users validate the build mirrors real workflows in the test environment	Clinical super-users	Sign-off required before go-live

REAL-LIFE SCENARIO 2A — INTEGRATED TESTING FAILURE

Lab results are not returning to the Epic chart after ordering

During integrated testing, a CBC is placed in Epic. Sunquest (lab system) receives the order. The lab processes the test. But 30 minutes later, no result appears in the Epic chart. Here is how you trace it:

Hop	Check	Finding
1 — Sunquest	Is the result finalized and released?	Yes — finalized at correct time
2 — Sunquest outbound	Has Sunquest queued the HL7 ORU for transmission?	Yes — queued and sent
3 — Mirth Connect	Did Mirth receive the message? Did it process or error?	FOUND: Error — 'Unknown Provider NPI: 1234567890'
4 — Mirth to Epic	Did Mirth successfully send to Epic?	No — processing halted at Step 3
Root Cause	NPI mismatch between Epic and Sunquest provider tables	Fix: Update Sunquest provider table with Epic NPIs. Retest.

⚠ LESSON

This defect would have been catastrophic at go-live — physicians ordering labs and never seeing results. Integration testing is not optional. Test the full order-to-result cycle, including result routing to the correct in-basket.

REAL-LIFE SCENARIO 2B — UAT CATCHES A CLINICAL LOGIC ERROR

The PHQ-9 depression screen fires on a 10-year-old patient

During UAT, a nurse super-user runs the Well Child Visit scenario for a 10-year-old. The PHQ-9 BPA (designed for patients 12+) fires. The design spec said ≥12 years. The build was configured as ≥10 years. A build error.

Why UAT requires clinicians, not just analysts: An analyst running this test might not recognize that a PHQ-9 on a 10-year-old is clinically wrong. The nurse super-user caught it immediately. This is the irreplaceable value of clinical eyes in UAT.

Your response:

- Log defect: BPA-012 — PHQ-9 BPA fires at age ≥10, should be ≥12. Severity: High (clinical safety). Build error in age filter.
- Fix BPA age logic in test environment
- Re-execute affected UAT scripts: Well Child 2–11 (should NOT fire), Well Child 12–17 (SHOULD fire), Adult Visit (SHOULD fire)
- Get re-sign-off from the nurse super-user who found the defect

REAL-LIFE SCENARIO 2C — WRITING A TEST SCRIPT

Complete test script: Medication Reconciliation with Drug-Allergy Alert

Field	Content
Test ID	MED-003
Module	Epic Orders / Medication Management
Tester Role	MA (medication entry) + Physician (reconciliation sign-off)
Preconditions	Test patient 'Jane Doe' exists in training env; no medications on file; Penicillin allergy documented

Step	Action	Expected Result
1	MA opens Jane Doe chart. Navigate to Medication Reconciliation.	Medication list empty. Penicillin allergy visible in allergy banner.
2	Add Amoxicillin 500mg PO TID as home medication.	Drug-allergy alert fires: 'Amoxicillin — Penicillin allergy — Cross-reactive.' Override

		required.
3	Attempt to override the allergy alert.	Override requires selection of reason: Patient tolerated previously / Risk outweighs benefit / Clinical judgment.
4	Log in as Physician. Review reconciliation.	Physician sees completed med list, allergy override with documented reason, option to sign.
5	Physician signs the reconciliation.	Signed status, time, and physician signature recorded in chart. Med list locked for MA editing.

PRACTICE PROJECT P2

Write a 10-Script UAT Test Plan for Lakewood's Go-Live

Build a complete UAT test plan covering the 10 most critical workflows. Each script must include: Test ID, Scenario, Preconditions, Numbered Steps, Expected Results, Actual Results column, Pass/Fail, and Defect Reference.

- New patient check-in with insurance verification
- Returning patient check-in — demographics change
- Vital signs flowsheet entry by MA
- Provider places a lab order (CBC + CMP)
- Lab result returns to chart and routes to provider in-basket
- Provider places medication order with drug-allergy alert
- Prescription electronically transmitted to pharmacy
- Provider documents office visit note using SmartPhrase
- Patient checked out, copay collected, visit closed
- Referral placed to specialist with clinical summary attached

DELIVERABLES

10 Test Scripts · Defect Log Template · UAT Sign-Off Form

STAGE 03 · Training Design & Delivery — Virtual and In-Person

Training is the bridge between what you built and what clinicians actually use. Bad training means good builds get abandoned at go-live. Weeks 10–14.

LAKEWOOD TRAINING REALITY — THE NUMBERS

Role	Count	Session Length	Delivery Mode
Physicians (MD/DO/NP/PA)	42	45 minutes max — no full-day pullout	In-person, small groups
MAs and Nurses	28	90 minutes	In-person, training rooms
Front Desk Staff	12	60 minutes	In-person + evening sessions
Billing Staff (remote)	6	60 minutes	Virtual only — Zoom
Clinic Managers	3	30-minute overview	In-person 1:1

REAL-LIFE SCENARIO 3A — ROLE-BASED SESSION DESIGN

Physician training: 45 minutes, no wasted time

Time	Topic	Method
0–5 min	Zero preamble. Open the system immediately.	Live demo — their patient list
5–20 min	Clinical note — SmartPhrases, Dragon integration, copy-forward	Hands-on practice in training env
20–35 min	Order entry — lab order, medication, referral; order sets for specialty	Hands-on practice
35–42 min	In-basket management — results, messages, refill requests	Hands-on practice
42–45 min	QRG distributed. Go-live support contact given.	Wrap-up

Nursing/MA training: 90 minutes

Time	Topic	Method
0–10 min	Patient list navigation, opening	Guided demo

	chart, finding encounter	
10–30 min	Vital signs flowsheet — enter 3 complete sets including PHQ-2 scenario	Hands-on practice
30–50 min	Medication reconciliation — home meds, allergy alert, override	Hands-on practice
50–75 min	Order management — view, print, communicate pending orders to patient	Hands-on practice
75–88 min	Full practice scenario — patient arrival to roomed	Independent practice with coaching
88–90 min	QRG distribution, go-live support contact, Q&A	Wrap-up

REAL-LIFE SCENARIO 3B — VIRTUAL TRAINING FAILURE AND RECOVERY

Your virtual billing training collapses 20 minutes in

You are 20 minutes into a virtual billing training via Zoom. Two staff cannot connect to the Epic training environment (VPN issue). One person's mic is cutting out. Two others have cameras off and are clearly doing other work.

What you do:

- Stop the session calmly: 'Let's take a 5-minute technical pause. If you cannot access the training environment, stay on the call and watch my screen — we will schedule a makeup session for those two.'
- Pivot format: Switch to watch-and-narrate. Walk through billing workflows on your screen with detailed commentary. Record and send the session.
- Re-engage disengaged participants: Ask direct questions by name — 'Maria, what is your current process for posting a partial denial payment?'
- Schedule individual makeup sessions for the two with VPN issues — they cannot go live without hands-on practice

Virtual training non-negotiables:

- Test every participant's system access 24 hours in advance — not day-of
- Maximum 8 participants per virtual session — no exceptions
- Co-facilitator monitors chat and flags technical issues
- Sessions 60 minutes or less — break into multiple sessions rather than extending
- Record every session; share within 24 hours

QRG DESIGN RULES — WHAT GETS USED VS. WHAT GOES IN THE TRASH

Seven rules for a Quick Reference Guide that clinical staff actually keep:

- One page only. If it does not fit, make two QRGs. Staff will not flip through a manual at the bedside.

- Screenshots matter more than words. A screenshot with a red arrow pointing to the right button replaces 200 words of instruction.
- Write steps as commands, not descriptions. 'Click the Flowsheets tab' — not 'The flowsheet is accessible via the Flowsheets tab.'
- Include the most common mistake at the bottom. Example: Common error: If vitals do not save, check that all required rows are completed before clicking Accept.
- Font size 11pt minimum. QRGs get read by tired nurses at 3am. Tiny text gets ignored.
- Put the go-live support number at the bottom of every QRG — in bold, large font.
- Laminate them, or print on card stock. A paper QRG in a clinical area lasts 3 days. A laminated one lasts months.

PRACTICE PROJECT P3

🎓 Design a Complete Training Program for Lakewood's Go-Live

Build a training plan that covers all 91 staff across 3 sites in 2 weeks, including virtual delivery for remote billing staff and off-hours sessions for evening front desk staff.

- Create a training schedule matrix: role × session type × location × date/time
- Write one 45-minute physician training agenda with learning objectives and timed sections
- Write one 90-minute nursing/MA training agenda
- Create one QRG (1 page) for vital signs flowsheet entry — numbered steps, screenshot placeholder, common error warning
- Write a pre-training communication email to all staff 1 week before their session
- Create a 5-question competency assessment to verify learning at the end of each session

DELIVERABLES

Training Schedule Matrix · 2 Session Agendas · 1 QRG · Pre-Training Email · Competency Assessment

STAGE 04 ·

Stakeholder Communication & Status Reporting

Communication is a deliverable, not a courtesy. The people funding this project need to trust you before they will support you when things go wrong. Ongoing throughout all 16 weeks.

STAKEHOLDER MAP — LAKEWOOD FAMILY HEALTH

Stakeholder	Role in Project	Communication Need	Frequency
CEO / Practice Administrator	Sponsor — approves budget and go/no-go	High-level status, risks to timeline or cost	Bi-weekly or on escalation
Medical Director	Clinical champion — physician liaison	Physician workflow approvals, clinical concerns	Weekly 1:1
Nursing Director	Clinical lead for MA/nursing workflows	Nursing workflow decisions, training coordination	Weekly
Billing Manager	Revenue cycle lead	Charge capture workflow, claims transmittal	Bi-weekly
IT Director	Infrastructure and security	Hardware readiness, interface status, security	Weekly
Epic Project Manager	Vendor PM	Build timeline, certification status, escalation	Weekly standing call
Front Desk Leads	End-user champions at each clinic	Workflow updates, training logistics	Bi-weekly

REAL-LIFE SCENARIO 4A — WRITING A YELLOW-STATUS REPORT

Week 9 of 16 — behind on testing, one defect blocking readiness

LAKEWOOD FAMILY HEALTH — EPIC IMPLEMENTATION

Status Report · Week 9 · Prepared by: Elhadji Badio · Teranga Health Advisory

Section	Content
Overall Status	🟡 YELLOW — At risk. One high-severity defect blocking lab integration sign-off. All other workstreams on track.
Accomplishments	Completed all 10 UAT scripts (8 passed, 2 failed). Nursing curriculum approved by Nursing Director.

	Physician super-user session at Clinic 1 completed (6 of 8 attended). All 91 training environment accounts created.
Open Defect — HIGH	LAB-004: Lab result return failure — HL7 ORU not routing to Epic chart. Root cause: Sunquest NPI table mismatch. Fix in progress with lab IT. Target: [Date]. If unresolved by [Date], go-live readiness must be reassessed.
Next Week Plan	Re-test LAB-004 after Sunquest fix. Begin mass nursing/MA training (8 sessions across 3 clinics). Complete physician training at Clinics 2 and 3.
Decision Needed	Two physicians at Clinic 2 have not scheduled training. Medical Director to mandate attendance. Decision deadline: [Date].

REAL-LIFE SCENARIO 4B — HANDLING A DIFFICULT STAKEHOLDER

Medical Director demands a 4-week delay at Week 12

The Medical Director calls: 'The physicians are not ready. Half have not been to training. I want to push go-live back 4 weeks.' You have vendor contracts, support teams, and 91 trained staff counting on the current date.

Your response framework:

- Do not argue. Acknowledge first: 'I hear you — physician readiness is the most critical factor. Let me make sure I understand the specific concern.'
- Separate data from feeling: 'As of today, 6 of 14 physicians at Clinic 2 have completed training. The 8 who have not are scheduled in the next two sessions. Can we agree that completing those sessions resolves the concern?'
- Present the cost of delay: 'A 4-week delay carries real costs — Epic support team fees, staff re-scheduling, potential contract penalties. I want leadership to have that information before deciding.'
- Escalate properly: This decision is above your authority. Document the concern, bring it to your supervisor and the Practice Administrator with cost analysis. Your job is to provide data, not make the call.
- Propose a middle path: 'Could we proceed with Clinics 1 and 3 on schedule and give Clinic 2 two additional weeks? This is sometimes called a phased go-live.'

PRACTICE PROJECT P4

□ Write Three Real Stakeholder Communications

Practice the formats you will use in every project. Tone and structure differ by audience — practice them separately.

- Write a Week 6 status report (green status, all on track) — practice the format when nothing is wrong
- Write a risk escalation memo to the Practice Administrator about the lab integration

defect — state the problem, the options, and what decision you need

- Write a go-live announcement email to all 91 staff — what is changing, when, what they need to do, who to call

DELIVERABLES

Status Report (Green) · Risk Escalation Memo · Go-Live Announcement Email

STAGE 05 ·

Change Management Processes

Change management has two meanings in EHR work: the IT process for controlling builds, and the human process for managing resistance. You must master both.

PART A — IT CHANGE MANAGEMENT: THE BUILD LIFECYCLE

Step	Action	Key Rules
1 — Request Submitted	Ticket opened with business justification, urgency, affected users	Anyone can submit — you assess feasibility and priority
2 — Impact Analysis	Document all systems, modules, and workflows affected by the change	A medication order change may require pharmacy, billing, and CDS review
3 — Approval (CAB)	Standard changes: pre-approved schedule. Emergency changes: expedited but still approved	Never build without approval. This rule has no exceptions.
4 — Build in Test	Build and test in non-production environment only. Document every configuration decision.	Production builds without test env approval = compliance violation
5 — Peer Review	Another analyst reviews test results. Clinical super-user validates where possible.	One pair of eyes is not enough for clinical-facing builds
6 — Deploy to Production	Follow maintenance window schedule. Validate immediately after deployment.	Confirm with CAB. Most orgs: Tuesday nights or Sunday mornings
7 — Post-Deploy Review	Verify functionality in production. Document outcome. Close the ticket.	If issues arise, open a new ticket — never patch a closed ticket

PART B — HUMAN CHANGE MANAGEMENT: MANAGING RESISTANCE

Scenario 5A: 'I have been using paper for 25 years. This EHR will kill my patients.'

This physician is scared, not obstinate. 25 years of muscle memory is being replaced by a system he does not understand, in front of patients who will see him struggle. Your job is not to convince him the EHR is great. Your job is to reduce his fear.

- Ask, do not tell: 'Tell me your biggest concern. What specific part of the workflow worries you most?' Listen. Do not immediately defend Epic.
- Individualize the solution: Build him a SmartPhrase library based on his most common note types. Show how his current phrases map to Epic dot-phrases. Make it feel familiar.

- Show, do not tell: Book a 20-minute 1:1 in the test environment. Walk through a complete visit note. Time it. 'That took 4 minutes and 12 seconds. How long does it take you to handwrite a note?'
- Use peer influence: The Medical Director saying 'Dr. Smith, I need you to lead by example' is 10x more effective than anything you say. Engage clinical leadership for high-resistance physicians.
- Set a clear expectation: 'Go-live is March 15. After that date, all documentation must be in Epic. Here is what support looks like for you on that day.'

Scenario 5B: Emergency Change — BPA firing on every ED patient

Go-live day 3. An ED physician calls: 'This sepsis alert fires on every patient — even a 22-year-old with a sprained ankle. Nobody is clicking it anymore. It is dangerous.' The BPA logic has a bug — it fires when any vital is charted, not only when sepsis criteria are met.

Emergency change process:

- Notify your supervisor immediately — patient safety issue, do not troubleshoot quietly
- Interim mitigation first: Get clinical leadership to approve a temporary BPA disable while you fix. A broken alert is worse than no alert — it trains users to ignore all alerts.
- Open an emergency change ticket: Classify P1 — Patient Safety. Document current behavior, expected behavior, root cause, fix planned, and approval obtained.
- Fix in test, validate, then deploy: Even emergency changes must be built in test and validated. This takes 30–60 minutes minimum. No shortcuts that skip testing for a clinical alert.
- Document the full timeline: Time of report to resolution. If this results in a patient safety event, your documentation protects you and the organization.

PRACTICE PROJECT P5

Complete a Full Change Request Cycle — End to End

Practice both the IT and human sides of change management using realistic Lakewood scenarios.

- Write a change request for adding a physician SmartPhrase (.lbp = low back pain assessment template)
- Write the impact analysis: what else could this change affect?
- Write a 3-scenario test plan for the SmartPhrase
- Write the post-implementation review and ticket closure documentation
- Write a resistance management plan for a clinic where 4 of 12 MAs are actively refusing the new medication reconciliation workflow

DELIVERABLES

Change Request · Impact Analysis · Test Plan (3 scripts) · Closure Documentation · Resistance Plan

STAGE 06 · End-User Support & Issue Resolution

Support starts at go-live and never fully stops. How you handle the first 48 hours of issues will define how clinical staff trust you for years.

ISSUE SEVERITY FRAMEWORK — MEMORIZE THIS

Severity	Definition	Response Time	Example
P1 — Critical	System down or patient safety at risk. No workaround exists.	Immediate — call supervisor NOW	Epic down. Medications not transmitting. Lab results missing.
P2 — High	Significant workflow degradation. Workaround is painful but possible.	Within 30 minutes	Scheduling errors for one department. Flowsheet not saving for one unit.
P3 — Medium	Inconvenient but manageable. Reasonable workaround exists.	Same business day	SmartPhrase not displaying correctly. Report showing wrong date range.
P4 — Low	Minor cosmetic or enhancement request. No workflow impact.	Next available sprint	Font size in a note template. New SmartPhrase request.

REAL-LIFE SCENARIO 6A — GO-LIVE DAY 1, 7:15AM

Three calls in the first 15 minutes — sorting training issues from defects

On go-live day, 70–80% of calls are training issues. Learning to distinguish them from real defects quickly is the most important skill of the day.

Call	Report	Category	Response
Call 1	'I cannot find my patient list'	Training Issue	Go to workstation. Click Patients tab in activity bar. 90-second resolution. Log it — if 10 people report this, send an immediate all-staff tip.
Call 2	'Flowsheet will not accept temperature — says out of range for 98.6°F'	DEFECT — P2	Flowsheet configured for Celsius range instead of Fahrenheit. Open emergency change request. Fix in

			test, deploy. Interim workaround: document in flowsheet Notes field. ETA to fix: 45 min.
Call 3	'I do not know how to close a visit'	Training Issue	Walk through visit closure live. Log it — send targeted tip to all front desk staff before noon.

How to distinguish training issues from defects:

- Ask: Does this happen every time, or just once? A defect is reproducible. A training issue is often a one-time mistake.
- Ask: Does this happen for other users or just you? A defect affects everyone with the same role or setup. A training issue is individual.
- Ask: Did it work in training? If it worked in the test environment, the build is likely correct — the user may be doing something differently.

REAL-LIFE SCENARIO 6B — ON-CALL AT 3:17AM

Medications are not transmitting to the Pyxis cabinet

MA at Clinic 1: 'The pharmacy ordered the Metoprolol but it is not showing up in the Pyxis cabinet. The patient needs this med in 20 minutes.'

Your immediate response — in this order:

- Patient safety first: Tell the MA to manually override the Pyxis using the armband override (nurse knows this procedure). Document in Epic that Pyxis integration was unavailable — this protects the nurse legally.
- Assess scope: Is this one medication or everything? One patient or all patients? Scope drives your escalation level.
- Check the interface: Log into Mirth Connect remotely. Check the Epic-to-Pyxis channel. Are messages queuing, failing, or not sending at all?
- Wake your supervisor: Medication cabinet integration failure is a P1. You do not troubleshoot this alone at 3am. Provide a status update: what you found, what you did, scope TBD.
- Call pharmacy: The on-call pharmacist needs to know the Pyxis integration is down so they can manage their own dispensing process independently.
- Log everything: Time of call, scope, what you found in Mirth, steps taken, when resolved. Every on-call interaction must have a ticket.

PRACTICE PROJECT P6

🛠 Build a Go-Live Support Playbook for Lakewood

Create the document set that supports your team through go-live day and the hyper-care period

that follows.

- Create a go-live command center contact sheet (who to call for what, with direct numbers by issue type)
- Write triage criteria: how do you tell the difference between a training issue and a system defect?
- Write the issue log template (Ticket, Time, Reporter, Description, Category, Severity, Steps, Resolution, Closed)
- Write the downtime procedure summary for Epic — what staff should do if Epic is completely unavailable during clinic hours
- Simulate 5 go-live calls: write the caller's statement, your triage category, your response, and your resolution

DELIVERABLES

Contact Sheet · Triage Guide · Issue Log Template · Downtime Procedure · 5 Call Simulations

STAGE 07 ·

Go-Live Execution & Hypercare

Go-live is the culmination of every stage that came before it. Everything you analyzed, built, tested, trained, and communicated converges on a single moment — the moment the new system goes live and real patients depend on it working. Week 15 of the Lakewood implementation. You are the lead analyst on the floor.

THE FOUR OUTPUTS OF THIS STAGE

1. Go-Live Readiness Assessment — signed off before cutover begins
2. Cutover Checklist — the sequenced steps that move from legacy to live
3. Go-Live Command Center Log — real-time issue tracking during live operations
4. Hypercare Transition Report — the handoff from go-live intensity to steady-state operations

PART A — GO-LIVE READINESS ASSESSMENT

Before a single user logs into the live system, the analyst must confirm that every prerequisite is met. Go-live readiness is not a feeling — it is a signed document with a checklist. If even one P1 item is open, go-live must be delayed or the risk must be formally accepted and documented by the Practice Administrator and Medical Director.

The 12-Point Go-Live Readiness Checklist

1. UAT sign-off complete — All P1 and P2 defects resolved. Sign-off sheet signed by Medical Director and Practice Administrator.

2. All interfaces tested and validated — Lab, pharmacy, imaging, and billing interfaces confirmed with AA ACK in production environment. MSH-11=P verified.

3. Training completion rate — Minimum 95% of clinical and administrative staff trained. Remaining 5% have scheduled makeup sessions before go-live date.

4. All user accounts active and tested — Every provider and staff member has logged into the production environment with correct role and permissions verified.

5. Downtime procedures printed and distributed — Paper downtime forms are at every workstation and nursing station. Staff know the downtime procedure and where forms are stored.

6. Command center staffed and contact list distributed — Command center location confirmed. All analysts, vendor support contacts, and IT contacts on a single laminated sheet at every station.

7. Legacy system read-only access confirmed — Staff can view historical records in the old system for the transition period but cannot enter new data. New data entry happens only in Epic from go-live moment forward.

8. Data migration validated — Patient demographics, active medication lists, problem lists, and appointment schedules migrated and spot-checked against source records. Reconciliation complete.

9. Hardware and connectivity confirmed — All workstations, printers, scanners, and mobile devices tested. Network speed validated at peak-load simulation. Backup internet connection confirmed active.

10. Vendor go-live support confirmed — Epic go-live support team engaged. On-site vendor analyst confirmed for Day 1 and Day 2. Escalation path to vendor technical team documented.

11. Rollback decision criteria documented — The specific conditions that would trigger a rollback to the legacy system are documented and agreed upon by the Practice Administrator, Medical Director, and vendor project manager.

12. Go-live announcement sent to all staff — Final go-live confirmation email sent to all 91 Lakewood staff confirming date, time, what changes, support contacts, and where to get help on Day 1.

PART B — CUTOVER EXECUTION

Cutover is the sequenced process of switching from the legacy system to the live EHR. It is not a single moment — it is a 12–36 hour window during which both systems are managed in parallel, the legacy system

is locked for new entries, and the new system is validated before the first real patient is seen. For Lakewood, cutover begins Friday at 6 PM and go-live begins Monday at 7 AM.

Lakewood Cutover Sequence — Friday 6 PM to Monday 7 AM

Friday 6:00 PM — Legacy system locked for new entries. Staff notified. Any patient seen after 6 PM is documented on paper downtime forms. Legacy remains read-only for historical access.

Friday 6:00 PM – Saturday 2:00 AM — Final data migration run. Delta migration — any records updated since the pre-migration run are extracted and loaded. This is the last data movement from legacy to Epic.

Saturday 2:00 AM – Sunday 6:00 PM — Validation window. Analyst team and physician champions validate 50 sample patient records in Epic against source. Confirm all interfaces active with AA ACK. Confirm scheduling, lab, and pharmacy workflows end-to-end.

Sunday 6:00 PM — Go / No-Go decision meeting. Practice Administrator, Medical Director, vendor PM, and lead analyst review readiness checklist. Unanimous Go confirmation required. Any open P1 item triggers rollback discussion.

Monday 7:00 AM — EPIC IS LIVE. First patient appointment in Epic. Command center staffed. All analysts on the floor. Support phones active. The implementation is live.

PART C — GO-LIVE DAY: THE COMMAND CENTER

The command center is the operational hub of go-live day. It is a physical location — a conference room or open floor area — where every issue is logged, triaged, and tracked in real time. Every call from the floor comes here first. Every resolution is documented here. The command center log becomes the post-live defect list and the institutional memory of what happened on Day 1.

Issue Triage Categories — Know These Cold

P1 — Patient Safety / System Down: The system cannot be used for clinical care. Lab results not routing. Medications not ordering. Scheduling completely down. Immediate escalation — vendor on the phone in under 5 minutes. Consider downtime procedures.

P2 — Significant Workflow Impact: A feature or workflow is broken but care can continue with a workaround. Resolve within 4 hours. Document the workaround and communicate it to affected staff immediately.

P3 — Training Issue / Minor Confusion: The system is working correctly but the user does not know how to use it. The analyst walks to the workstation and shows them in real time. Document as a training gap — consider a same-day refresher for affected role group.

Important: On go-live day, 70–80% of calls are P3 training issues, not defects. The analyst who cannot distinguish a training issue from a system defect in under 60 seconds will waste P1 escalation resources on P3 problems and leave real P1 issues unresponded to. Ask one question first: "Does the system allow you to complete the task — yes or no?" If yes, it is a training issue. If no, it may be a defect.

PART D — HYPERCARE: THE TWO WEEKS AFTER GO-LIVE

Hypercare is the two-week period immediately following go-live when the full analyst team remains available at elevated support levels. Issue volume is highest in this window. Users are learning. Workflows are being refined in real use. Defects that were not caught in UAT will surface now. The analyst's job during hypercare is to close issues faster than they open.

Hypercare Daily Rhythm

7:00 AM — Morning huddle. Review overnight issue log. Assign each open issue to an analyst. Confirm all interfaces processed correctly overnight — check Mirth/Rhapsody queue depth and ACK rates.

8:00 AM – 5:00 PM — Floor coverage. Analysts are physically present in each clinic area. Not at the command center — on the floor, visible, walking to every user who needs help. Presence reduces call volume and builds trust faster than any other action.

5:00 PM — End-of-day issue review. Update issue log. Escalate any P1 or P2 still open. Prepare daily summary email to Practice Administrator and Medical Director — issues opened, issues resolved, issues pending.

End of Week 2 — Hypercare transition. All P1 and P2 issues resolved or formally accepted with a remediation plan. System is stable. Handoff from intensive go-live support to steady-state operations. Analyst team reduces floor presence. Standard support channel takes over.

REAL-LIFE SCENARIO 7A — GO-LIVE DAY 1, 8:42 AM

It is 8:42 AM on Monday morning. The first clinic opened at 8:00 AM. You are at the command center when three calls arrive simultaneously: (1) A physician cannot find how to order labs in Epic. (2) The front desk says the check-in screen is frozen. (3) A nurse reports that a patient's medication list from the old system is missing entirely from their Epic chart.

Your Triage Response

Call 1 — Physician cannot find lab ordering: P3 Training issue. Assign floor analyst to walk to physician immediately and demonstrate the CPOE ordering workflow. Document as a training gap — add to afternoon refresher session for all providers at Clinic 1.

Call 2 — Check-in screen frozen: Potential P2. Ask: "Does the screen respond at all?" If browser-based — clear cache, hard refresh. If Hyperspace — restart application. If multiple workstations affected — P1, call vendor immediately. Document timestamp and resolution.

Call 3 — Missing medication list: P1 — Patient safety risk. A missing medication list means a prescriber could order a medication without knowing what the patient is already taking. Immediate actions: (1) Pull up patient chart in legacy system for the nurse to use as reference right now. (2) Notify Medical Director. (3) Pull migration log — did this patient's medications migrate? (4) If systemic, check 10 additional patients immediately. (5) If pattern confirmed, declare P1 migration defect and notify vendor. Document every action with timestamps.

□ STAGE 07 PRACTICE PROJECT

Build the Complete Go-Live Package for Lakewood

Using everything in this stage, produce the following deliverables for Lakewood Family Health's Epic go-live:

1. Complete the 12-point readiness checklist for Lakewood — mark each item as Green (ready), Yellow (at risk), or Red (not ready). Write a one-sentence justification for each rating.
2. Write the Go / No-Go meeting agenda for Sunday 6 PM. Who is in the room, what is reviewed, what is the decision criteria, and what happens if the decision is No-Go.
3. Build a command center issue log template with columns for: Issue ID, Time Reported, Reporter, Description, Triage Level (P1/P2/P3), Assigned Analyst, Resolution, Time Resolved, and Root Cause Category.
4. Simulate 5 go-live calls. For each: write the caller's statement, your triage category (P1/P2/P3), your first response, and your resolution path.
5. Write the end-of-Week-2 Hypercare Transition Report — summarizing issues opened, issues resolved, issues escalated to vendor, and the formal recommendation to transition from hypercare to steady-state operations. Address it to the Practice Administrator and Medical Director.

Stage 07 Deliverables: Go-Live Readiness Assessment · Go / No-Go Meeting Agenda · Command Center Issue Log · 5 Simulated Go-Live Call Responses · Hypercare Transition Report

STAGE 08 · Working with Interoperability & Integration Support

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Every system in a clinic talks to another system. When those conversations break, patient care breaks. You do not need to be an interface engineer — but you need to know enough to troubleshoot intelligently and escalate correctly.

LAKEWOOD'S INTEGRATION MAP

Inbound to Epic	Outbound from Epic
• Sunquest Lab → Epic: HL7 ORU (results) — CBC, CMP, culture results to chart and in-basket • Clearinghouse → Epic: 271 eligibility responses — insurance status at scheduling • DrFirst Pharmacy → Epic: Medication fill confirmations via NCPDP standard • MyChart → Epic: Patient-submitted forms, questionnaire responses, appointment requests	• Epic → Sunquest: HL7 ORM (orders) — lab orders transmitted for processing • Epic → DrFirst: Electronic prescriptions via NCPDP SCRIPT standard • Epic → Pyxis/Omnicell: Medication orders to automated dispensing cabinet • Epic → Clearinghouse: 837P claims and 270 eligibility requests • Epic → Radiology PACS: HL7 ORM for imaging; HL7 ORU returns reports

REAL-LIFE SCENARIO 7A — TRACING A BROKEN HL7 MESSAGE

A CBC was ordered 2 hours ago. The result is in Sunquest but not in Epic.

An HL7 result travels 5 hops from the lab analyzer to the Epic chart. Check each hop in order — do not skip ahead.

Hop	Where to Look	What You Are Checking
1 — Sunquest	Lab system result screen	Is the result finalized and released? (Not just resulted — finalized.) If not finalized, it has not sent yet.
2 — Sunquest Outbound	Sunquest interface outbound queue	Has Sunquest queued the HL7 ORU message for transmission? If queued but not sent, the Sunquest-to-Mirth connection may be down.
3 — Mirth Connect	Mirth channel log — Sunquest-to-Epic channel	Did Mirth receive the message? Search by patient MRN. If received, did it process successfully or error?
4 — Mirth to Epic	Mirth outbound log	Did Mirth send to Epic? Look for an acknowledgment (ACK) from Epic. No ACK = Epic did not receive or rejected it.
5 — Epic	Epic HL7 error queue (run by Epic admin)	Common rejections: unknown MRN, unknown provider NPI, unknown test code. The error message tells you exactly what failed.

DOCUMENTATION STANDARD

CBC ordered [time] for patient [MRN]. Result finalized in Sunquest at [time]. ORU found in

Mirth at [time]. Mirth error: 'Unknown OBR code: 58410-2.' Sunquest sending LOINC code not mapped in Epic lab result table. Resolution: Epic admin mapped LOINC 58410-2 to CBC panel. Message reprocessed. Result appeared in Epic chart at [time].

REAL-LIFE SCENARIO 7B — E-PRESCRIBING INTEGRATION TESTING

How do you test that a prescription reaches the pharmacy before go-live?

Test	Scenario	What to Confirm
Test 1 — Standard Rx	Place Lisinopril 10mg order to designated test pharmacy	Pharmacy receives within 5 min. Drug name, dose, sig, quantity, and prescriber are all correct.
Test 2 — Controlled Substance (EPCS)	Place Schedule IV medication with two-factor provider auth	Pharmacy receives. DEA-required EPCS attestation transmitted. Two-factor authentication functioned correctly.
Test 3 — Refill Request	From test pharmacy, send refill request back to Epic	Refill request arrives in prescribing physician's in-basket as a refill request message type.
Test 4 — Cancel	Place order, transmit, then cancel in Epic	Pharmacy receives the cancellation. Medication removed from their queue within expected time.

PRACTICE PROJECT P7

□ Build an Integration Test Plan & Troubleshooting Matrix

Create the integration documentation set that supports pre-go-live validation and post-go-live issue resolution.

- Draw Lakewood's full integration map (Epic + all connected systems) as a diagram
- Write an integration test plan for lab order-to-result (ORM to ORU round trip) with 4 test scenarios
- Write a troubleshooting decision tree: Lab result not appearing in Epic chart — where do you look first, second, third?
- Write an e-prescribing integration test plan (4 scenarios as described above)
- Write the interface inventory table: System, Direction, Message Type, Owner (IT vs. Vendor), Test Status

DELIVERABLES

Integration Map Diagram · Lab Test Plan (4 scenarios) · Troubleshooting Decision Tree · eRx Test Plan · Interface Inventory Table

CAPSTONE PROJECT

End-to-End EHR Implementation Simulation

Scenario: Ridgeview Primary Care is a 2-clinic practice (18 providers, 24 nursing/MA staff, 8 front desk, 4 billing staff) transitioning from paper charts and a basic PM system to Epic. You are the sole EHR analyst. You have 12 weeks. Complete all deliverables and compile them into a single implementation portfolio.

12-WEEK PROJECT TIMELINE

Weeks	Stage Focus	Key Deliverables
1–2	Stage 1 — Workflow Analysis	Current-state flowchart, future-state flowchart, gap analysis (8+ gaps), design spec for nursing flowsheet
3	Stage 4 — Stakeholder Communication	Stakeholder map, communication plan, first status report (green)
4–5	Stage 5 — Change Management	2 complete change request cycles end-to-end with all documentation
6	Stage 8 — Interoperability & Integration	Integration map, lab test plan, troubleshooting decision tree, eRx test plan
7–8	Stage 2 — UAT & Testing	10-script UAT test plan, defect log with 3 simulated defects, UAT sign-off form
9–10	Stage 3 — Training	3 role-based curricula (physician / nurse-MA / front desk), 3 QRGs, training schedule matrix
11–12	Stage 6 — End-User Support & Issue Resolution	Support playbook, contact sheet, downtime procedure, 8 simulated support calls with triage
Week 12	Portfolio Assembly	All 7 stages organized in one document with table of contents

COMPLETE DELIVERABLE CHECKLIST

Check off each item as you complete it. This checklist is your portfolio index.

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Stage 1 — Workflow Analysis & Design

- Current-state flowchart for check-in (swim lanes, decision points, system handoffs)
- Future-state flowchart for check-in in Epic — changes marked vs. current state
- Gap analysis — 8+ rows with Risk Level (H/M/L) and Mitigation for each
- Design specification for nursing assessment flowsheet — field-by-field detail

Stage 2 — UAT & Scenario-Based Testing

- 10-script UAT test plan covering all critical workflows including lab and eRx
- Defect log with 3 simulated defects — each with root cause and resolution
- UAT sign-off form with clinical super-user signature block

Stage 3 — Training Design & Delivery

- Training schedule matrix: all roles, all sessions, 2-week training window
- 45-minute physician training agenda with timed sections and learning objectives
- 90-minute nursing/MA training agenda with hands-on practice breakdown
- 3 QRGs: check-in workflow, vital signs flowsheet, medication reconciliation

Stage 4 — Stakeholder Communication

- Stakeholder map with communication frequency and decision authority for each stakeholder
- Status report — green status (Week 6, all on track)
- Status report — yellow status with defect escalation and decision request
- Go-live announcement email to all 91 staff

Stage 5 — Change Management

- Change Request #1: SmartPhrase build — request, impact analysis, test plan, closure
- Change Request #2: BPA logic fix — emergency change process with full documentation
- Resistance management plan for a resistant clinical group

Stage 6 — End-User Support

- Go-live support playbook: contact sheet, triage guide, issue log template
- Downtime procedure summary for total Epic unavailability
- 8 simulated support calls — each with triage category, response, and resolution

Stage 8 — Interoperability & Integration

- Integration map diagram showing all 6 interfaces
- Lab result troubleshooting decision tree (5-hop trace)
- Interface inventory table: all integrations with owner and test status
- eRx integration test plan (4 scenarios including EPCS controlled substance)

Portfolio Assembly

- All deliverables compiled into a single PDF or binder with table of contents
- Each stage clearly labeled and separated with a cover page per stage

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THIS PORTFOLIO IS YOUR INTERVIEW

Bring this completed capstone portfolio to every EHR analyst interview. Walk the interviewer through each stage. Show them your gap analysis. Show your test scripts. Show your QRG. No other candidate will walk in with a simulated end-to-end implementation portfolio. That is how you get hired at a higher level, faster.