



WHITE PAPER

From EHR Adoption to EHR Optimisation

Why go-live is the beginning, not the end — and how to measure whether your EHR is actually improving care.

Contents

Executive Summary.....	3
1. Introduction: Go-Live Is a Milestone, Not a Finish Line.....	3
2. The Adoption-to-Optimisation Lifecycle	4
3. Why Optimisation Is So Often Neglected	5
4. The Cost of Standing Still	5
5. Building an EHR Optimisation Program	6
6. The Six Domains of Optimisation.....	7
7. How to Measure Whether Your EHR Is Actually Improving Care	8
8. Governance: Sustaining the Program.....	9
9. Common Pitfalls and How to Avoid Them.....	9
10. Case Snapshot: The Framework in Practice.....	10
11. Conclusion.....	11
References	12
About 4W Sciences.....	13

Executive Summary

For most health systems, the electronic health record go-live date is treated as the finish line: the culmination of years of planning, capital investment, workflow redesign, and change management. In reality, go-live marks the beginning of the EHR's useful life, not the end of the project. The system that limps across the go-live line — configured under deadline pressure, populated with default content, and only partially adapted to local workflows — is rarely the system that will deliver the clinical, operational, and financial value the initial business case promised.

Optimisation is the deliberate, ongoing work of closing that gap: refining workflows, templates, order sets, and clinical decision support; strengthening interoperability and reporting; and continuously validating that the EHR is measurably improving — not simply digitising — the delivery of care. Yet in many organisations, optimisation receives a fraction of the attention, budget, and governance rigor that implementation did, even though the evidence suggests it is where most of the EHR's long-term value is actually created or lost.

This white paper makes the case for treating optimisation as a permanent operating discipline rather than a post-implementation afterthought. It outlines why optimisation is so often neglected, what a structured optimisation program looks like, which domains of the EHR typically yield the greatest return on renewed attention, and — critically — how health systems can measure whether their EHR investment is actually improving care, rather than assuming that go-live itself was the achievement.

The guidance draws on peer-reviewed research on EHR usability, clinician burnout, alert fatigue, and digital maturity, referenced in full at the end of this paper, to ground the framework in evidence rather than vendor marketing or anecdote.

1. Introduction: Go-Live Is a Milestone, Not a Finish Line

Ask any clinician who has lived through an EHR go-live, and they will describe a familiar arc: months of training and workflow redesign, an intense go-live week with elevated support staffing, a rocky first few weeks of reduced productivity and unfamiliar clicks, and then — gradually — a return to something resembling normal. For the project team, go-live is often the moment champagne is poured and the steering committee is stood down. For the organisation's finances, it is frequently the point at which the implementation budget closes and remaining capacity shifts to the next capital priority.

This instinct is understandable but misplaces the milestone. A go-live event demonstrates that a system can technically run in production; it says very little about whether that system is configured to support safe, efficient, high-quality care in the specific context of that organisation's patients, specialties, and workflows. Most go-live configurations reflect vendor defaults, a compressed build timeline, and compromises made to hit a fixed date — not the mature, locally-tuned configuration that reflects a full year or more of real clinical use.

The research bears this out. Studies of EHR usability consistently find that self-reported usability, measured with standardised instruments such as the System Usability Scale, remains a strong predictor of physician task load and burnout well after go-live, suggesting that usability problems present at implementation are not self-resolving over time without deliberate intervention. Left unaddressed, the friction embedded in an under-optimised EHR does not fade — it compounds, contributing to documentation burden, after-hours charting, alert fatigue, and ultimately clinician attrition.

The organisations that realise durable value from their EHR investment are those that treat go-live as the starting gun for a multi-year optimisation program, not the closing ceremony of a project. This paper lays out a practical approach to building that program and, just as importantly, to proving that it is working.

2. The Adoption-to-Optimisation Lifecycle

It is useful to think of the EHR journey as four overlapping phases rather than a single project with a start and end date.

Selection and implementation

The system is selected, configured against a base build, and rolled out to end users. Success is measured primarily by go-live readiness: training completion, technical stability, and safe cutover from legacy systems.

Stabilisation

In the weeks immediately following go-live, the focus is triage: resolving critical workflow breaks, safety issues, and the highest-volume help-desk tickets. This phase is necessarily reactive, and productivity typically dips before recovering.

Optimisation

Once the system is stable, attention shifts to proactive refinement: streamlining templates, tuning clinical decision support to reduce unnecessary alerts, closing interoperability gaps, and adapting workflows based on real usage data rather than assumptions made during build.

Transformation and continuous value

In mature organisations, the EHR becomes a platform for ongoing clinical and operational innovation — advanced analytics, ambient documentation, population health tools, and new digital front-door capabilities — layered onto a well-optimised foundation, with measurement built into the way new capability is introduced.

The critical insight is that these phases are not sequential in the way a project plan implies. Optimisation should begin as soon as the system stabilises — typically within one to two months of go-live — and, unlike implementation, it never formally ends. Organisations that treat optimisation as a discrete project with its own start and end date tend to under-invest in the ongoing, iterative work that keeps a system aligned with evolving clinical practice, regulatory requirements, and organisational strategy.

3. Why Optimisation Is So Often Neglected

If the case for continuous optimisation is so clear, why is it so often under-resourced? A handful of structural and organisational dynamics explain the pattern.

The budget cliff

Implementation is typically funded as a large, discrete capital project with an approved multi-year budget and dedicated staffing. Once go-live occurs, that funding — and often the project team itself — is redirected elsewhere, leaving optimisation to compete for scarce operating budget against every other organisational priority.

Change fatigue

Clinicians and staff who have just endured months of training and workflow disruption are often reluctant to engage with further changes, even improvements, in the months immediately following go-live. This fatigue can be mistaken for a lack of demand for optimisation, when it more often reflects a need for better-paced, more targeted change management.

Success is declared too early

A technically stable go-live is frequently reported to the board and executive team as "complete," creating an organisational narrative that the EHR project is finished, which makes it harder to secure continued investment for what looks, from a governance perspective, like additional spending on an already-delivered initiative.

Absence of a feedback loop

Without structured mechanisms to capture clinician-reported friction, analyse system usage data, and translate both into a prioritised backlog, optimisation opportunities simply go unseen — the organisation has no reliable way to know what needs fixing.

Governance built for delivery, not iteration

Implementation governance structures — steering committees, workstream leads, a fixed go-live date — are designed to drive a project to a single milestone. Optimisation requires a different governance model built for continuous, prioritised, incremental delivery, and organisations often simply disband the former without building the latter.

4. The Cost of Standing Still

The consequences of under-investing in optimisation are not merely a missed opportunity for further improvement — they represent a measurable, ongoing cost to the organisation, its clinicians, and its patients.

Clinician burnout and attrition

Large-scale physician surveys have found that poor EHR usability and organisational EHR support are significantly associated with burnout, and that after-hours documentation time — often called "pajama time" — is itself an independent contributor. Burnout drives clinician turnover, and replacing a physician is a substantial direct and indirect cost to any health system.

Alert fatigue and safety risk

Systematic reviews of clinical decision support have found override rates for medication safety alerts ranging widely but frequently exceeding 50 to 90 percent, with a meaningful share of overrides occurring on clinically appropriate alerts. An EHR with poorly tuned alerting does not just annoy clinicians — it actively degrades the safety value the decision support was implemented to provide, because clinicians learn to click through alerts indiscriminately.

Foregone quality and safety gains

Cross-sectional research linking digital maturity to independently measured hospital safety outcomes has found that hospitals with advanced EMR adoption maturity have significantly higher odds of achieving top safety grades and lower rates of adverse events than less mature organisations — suggesting that stopping short of full optimisation leaves real, measurable safety benefit on the table.

Erosion of the original business case

EHR implementations are typically justified with a business case built on efficiency gains, reduced duplicate testing, improved coding accuracy, and quality bonus capture. An under-optimised system rarely delivers the full value of that case, since many of the assumed benefits depend on configuration, workflow adoption, and data quality maturing well beyond go-live defaults.

Alert override rates for medication safety checks frequently exceed 50–90% in published studies — evidence that under-tuned clinical decision support actively erodes the safety value it was built to provide.

5. Building an EHR Optimisation Program

A durable optimisation program has a small number of essential building blocks. None of them require reinventing the organisation's IT governance from scratch — most extend structures that already exist from implementation, reoriented for continuous delivery.

Executive sponsorship and dedicated funding

Optimisation should have its own recurring operating budget line, distinct from — but coordinated with — the capital budget for new system investments. A named executive sponsor, typically the CMIO or CNIO working alongside the CIO, keeps the program visible at the leadership level rather than allowing it to be absorbed into general IT support work.

A structured intake and prioritisation process

Requests for workflow changes, new order sets, report modifications, and configuration updates should flow through a single intake channel, be triaged for safety urgency, and scored using a transparent framework — very similar in spirit to the impact-versus-effort model used for other IT investment decisions — so that the backlog reflects organisational value rather than whoever asked most recently or most loudly.

A super user and physician informaticist network

Clinical informaticists and unit-based super users provide the two-way channel between frontline workflow reality and the build team: they surface friction that would otherwise go unreported, and they help translate optimisation changes back into practical guidance for their peers.

Usage and analytics instrumentation

Modern EHR platforms expose rich usage log data — time in system, time on documentation, order entry patterns, in-basket burden, alert firing and override rates. Standing up regular reporting on these metrics (rather than relying solely on anecdotal complaints) allows the optimisation team to find friction proactively and to verify that a given change actually improved the metric it targeted.

A recurring release and communication cadence

Predictable release cycles — for example, monthly minor updates and quarterly larger releases — paired with clear advance communication of what is changing and why, reduce the change fatigue that otherwise makes every optimisation effort feel like a repeat of go-live.

6. The Six Domains of Optimisation

Not all optimisation work delivers equal value. Six domains consistently surface as the highest-yield areas for renewed attention after go-live.

Clinical documentation and templates

Note bloat, redundant fields, and templates copied from vendor defaults rather than adapted to specialty workflow are among the most common and most fixable sources of documentation burden. Structured audits of template usage — which fields are actually completed versus routinely skipped — frequently reveal quick, high-impact simplification opportunities.

Order sets and clinical decision support

Alert and order-set tuning should be an ongoing clinical governance function, not a one-time build activity. Reviewing override rates by alert type, retiring low-value alerts, and adding context-specific logic (for example, suppressing an interaction alert for a combination a patient has already tolerated) directly targets the alert-fatigue evidence discussed above.

Interoperability and data flow

Gaps identified after go-live — missing outside-record visibility, manual re-entry of data from referral partners, incomplete medication reconciliation feeds — are prime optimisation targets, and increasingly addressable through the HL7 FHIR-based integration patterns most modern EHR platforms now support natively.

Patient engagement and portal experience

Portal adoption, digital intake, self-scheduling, and asynchronous messaging workflows are rarely fully built out at go-live and often represent some of the highest-visibility, most patient-facing optimisation opportunities available.

Revenue cycle and clinical documentation integrity

Coding accuracy, charge capture completeness, and clinical documentation integrity workflows typically mature significantly in the first one to two years post go-live as documentation patterns are refined — directly affecting the financial return the original business case promised.

Reporting and analytics

Dashboards and quality reports built during implementation often reflect what was easy to build under deadline pressure rather than what leadership and clinical teams actually need to manage performance; a periodic report rationalisation exercise — retiring unused reports and building the ones that are actually requested — is a consistently underused optimisation lever.

7. How to Measure Whether Your EHR Is Actually Improving Care

The central question this paper poses in its title — is the EHR actually improving care? — cannot be answered by go-live completion, training attendance, or system uptime alone. It requires a deliberate measurement framework spanning five dimensions, tracked consistently before and after each significant optimisation effort.

Clinician experience and workload

Standardised usability instruments (such as the System Usability Scale), EHR-derived time-in-system and after-hours documentation metrics, and periodic burnout screening give a quantifiable read on whether the system is becoming easier or harder to use over time.

Efficiency and workflow

Time to complete common tasks (order entry, discharge documentation, prior authorization requests), in-basket message volume and turnaround time, and help-desk ticket volume by category all indicate whether workflow friction is trending down.

Quality and patient safety

Alert override rates (overall and by alert type), medication error and near-miss rates, and performance on relevant quality measures that depend on accurate, timely EHR data provide a direct link between optimisation work and clinical outcomes.

Financial performance

Coding accuracy and case-mix index trends, denial rates tied to documentation gaps, and duplicate test/imaging rates connect optimisation activity back to the financial case that justified the original EHR investment.

Patient experience

Portal adoption and active-use rates, patient satisfaction scores related to communication and scheduling, and patient-reported burden (for example, having to repeat information already in the record) capture the patient-facing half of the value equation that is often overlooked in EHR metrics dominated by clinician and financial measures.

Two practical disciplines make this framework usable rather than aspirational. First, establish a baseline for each metric before undertaking major optimisation work, so improvement (or lack of it) can be demonstrated rather than assumed. Second, tie specific metrics to specific optimisation

initiatives at the point they are approved — a template simplification project should have a stated documentation-time target; an alert-tuning project should have a stated override-rate target — so that the governance committee reviewing the optimisation backlog can see a track record of delivered value, not just completed tickets.

8. Governance: Sustaining the Program

Measurement only changes behaviour if it is embedded in governance. A standing EHR optimisation or clinical informatics governance committee — meeting monthly or bi-weekly, chaired by the CMIO or CNIO, with representation from major clinical service lines, nursing informatics, IT, compliance, and revenue cycle — should own three ongoing responsibilities: reviewing and prioritising the optimisation backlog using the impact/effort model described earlier, reviewing the dashboard of clinician, efficiency, quality, financial, and patient experience metrics on a regular cadence, and reporting a concise summary to executive leadership and the board on a quarterly basis so that optimisation remains visible as a strategic, funded program rather than background IT maintenance.

9. Common Pitfalls and How to Avoid Them

A number of recurring mistakes limit the effectiveness of optimisation programs even at organisations that have made the initial commitment to fund one.

Treating optimisation as a ticket queue rather than a strategic program

Working strictly first-in-first-out through help-desk requests, without a prioritisation framework tied to organisational goals, tends to reward the loudest requesters rather than the highest-value work.

Optimising without measuring

Shipping configuration changes without a defined success metric makes it impossible to demonstrate value to leadership or to learn which types of changes actually move the needle.

Under-investing in change management for optimisation releases

Optimisation changes still require communication and, in many cases, training; skipping this step because the change feels "smaller" than the original implementation often generates as much frustration as the problem it was meant to solve.

Siloed ownership

When documentation templates, order sets, interoperability, and reporting are each owned by different, uncoordinated teams, optimisation efforts can conflict with one another or duplicate work; a single governance body with visibility across domains prevents this.

No sunset date for legacy configuration

Vendor-default content and workflows adopted under go-live time pressure are sometimes never revisited because there is no formal trigger to do so; scheduling periodic configuration reviews (for

example, annually per major clinical domain) prevents optimisation debt from accumulating indefinitely.

10. Case Snapshot: The Framework in Practice

A multi-hospital health system completed its EHR go-live on schedule and declared the implementation a technical success: the system was stable, training completion rates were high, and no major safety events occurred during cutover. Eighteen months later, however, physician engagement surveys showed rising dissatisfaction, after-hours documentation time had increased rather than decreased, and medication alert override rates exceeded 80 percent for several high-volume alert types.

Override rates exceeded 80% for several high-volume alerts 18 months post go-live — the trigger for launching a funded, governed optimisation program.

Leadership established a standing clinical informatics governance committee, funded a small, dedicated optimisation team, and built a baseline dashboard across the five measurement dimensions described above. The team's first two initiatives — a targeted review of the twenty highest-volume, highest-override medication alerts, and a specialty-by-specialty documentation template audit for the three highest-volume services — were each launched with a stated, measurable target rather than an open-ended "improve the workflow" mandate.

Within six months, override rates for the targeted alert set had fallen meaningfully as low-value alerts were retired and remaining alerts were made more context-specific, and average documentation time for the three targeted specialties had measurably declined. Reporting these outcomes back to the board — in the same quantitative terms used to justify the original EHR investment — secured recurring funding for the optimisation program going forward, converting what had been an ad hoc support function into a permanent, governed capability.

11. Conclusion

Go-live is a necessary milestone, but it is a poor proxy for success. The evidence on EHR usability, clinician burnout, alert fatigue, and digital maturity all point to the same conclusion: the gap between a technically functioning EHR and one that is genuinely improving care is closed through sustained, measured, well-governed optimisation — not through the implementation project alone.

Health systems that build a durable optimisation program — with dedicated funding, structured prioritisation, a clinician feedback loop, and a measurement framework spanning clinician experience, efficiency, quality, finance, and patient experience — are the ones able to answer, with evidence rather than assumption, the question every board eventually asks: is our EHR actually working? Those that treat go-live as the finish line are left, often years later, still trying to explain why the promised value of their EHR investment never fully materialised.

References

The evidence base referenced throughout this paper is provided below in full for readers who wish to consult the primary literature.

1. Snowdon A, Hussein A, Danforth M, Wright A, Oakes R. Digital Maturity as a Predictor of Quality and Safety Outcomes in US Hospitals: Cross-Sectional Observational Study. *J Med Internet Res*. 2024;26:e56316.
2. Eschenroeder HC, Manzione LC, Adler-Milstein J, et al. Associations of physician burnout with organizational electronic health record support and after-hours charting. *J Am Med Inform Assoc*. 2021;28(5):960-966.
3. Holmgren AJ, Hendrix N, Maisel N, et al. Electronic Health Record Usability, Satisfaction, and Burnout for Family Physicians. *JAMA Netw Open*. 2024;7(8):e2426956.
4. Melnick ER, Harry E, Sinsky CA, Dyrbye LN, Wang H, Trockel MT, West CP, Shanafelt T. Perceived Electronic Health Record Usability as a Predictor of Task Load and Burnout Among US Physicians: Mediation Analysis. *J Med Internet Res*. 2020;22(12):e23382.
5. Ray CE, Wilson GM, Hughes AM, et al. Alert fatigue measurement in clinical decision support: a systematic review. *J Am Med Inform Assoc*. 2026;ocag064.
6. van der Sijs H, Aarts J, Vulto A, Berg M. Overriding of drug safety alerts in computerized physician order entry. *J Am Med Inform Assoc*. 2006;13(2):138-147.
7. Kaushal R, Shojania KG, Bates DW. Effects of computerized physician order entry and clinical decision support systems on medication safety: a systematic review. *Arch Intern Med*. 2003;163(12):1409-1416.
8. Menachemi N, Collum TH. Benefits and drawbacks of electronic health record systems. *Risk Manag Healthc Policy*. 2011;4:47-55.
9. Kruse CS, Kristof C, Jones B, Mitchell E, Martinez A. Barriers to Electronic Health Record Adoption: a Systematic Literature Review. *J Med Syst*. 2016;40(12):252.
10. Healthcare Information and Management Systems Society (HIMSS). Electronic Medical Record Adoption Model (EMRAM). HIMSS Analytics.
11. KLAS Research. Arch Collaborative: Physician and Clinician EHR Experience Reports.
12. Office of the National Coordinator for Health Information Technology (ONC). 21st Century Cures Act: Interoperability, Information Blocking, and ONC Health IT Certification Program Final Rule. 2020.
13. Agency for Healthcare Research and Quality (AHRQ). SAFER Guides: Safety Assurance Factors for EHR Resilience.

About 4W Sciences

4W Sciences partners with health systems to build sustainable EHR optimisation programs — from governance design and measurement frameworks through hands-on workflow, clinical decision support, and interoperability optimisation. For guidance on assessing your organisation's current optimisation maturity and building a measurement framework tailored to your EHR investment, contact our team.