HEALTH DATAPALOOZA

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# Why Good Health Data Products Fail

## And What the Evidence Says About Fixing It

*By the Health Datapalooza Editorial Team*

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## The Product Worked. The Rollout Didn't.

You've seen this story. A health data product clears every technical hurdle: interoperability testing, security review, clinical validation. Then it hits a real operational environment and stalls. The pilot goes well enough. The expansion doesn't.

A population health analytics platform gets integrated into a large health system's EHR. The data model is sound. The dashboards are well-designed. Six months in, fewer than 15 percent of the clinicians it was built for have logged in more than once. The contract renewal conversation is uncomfortable.

A remote patient monitoring tool for chronic disease management passes a rigorous outcomes study. The vendor lands three major health system contracts. Within eighteen months, patient engagement has cratered, and two of the three systems are quietly sunsetting the program. The outcomes data was real. The problem was everything that happened between "signed contract" and "routine use."

If you've been in health tech long enough, you have your own version. The details change; the shape doesn't.

The explanations are always the same: the health system wasn't ready, the change management was insufficient, the champion left, the vendor oversold. These aren't wrong, exactly. But they're a diagnosis that never leads to treatment. They describe a pattern without explaining it, which means you're left waiting for the same pattern to repeat on the next deployment.

Here is the argument of this piece, stated plainly: **the health data industry is systematically misdiagnosing its biggest commercial problem.** What you're calling a change management problem or a customer readiness problem is actually an implementation design problem. The distinction matters, because one of those is solvable and the others are just excuses wearing professional language.

There is a discipline that has spent decades studying exactly this: why proven interventions fail when they move from controlled settings into real-world operations. It has produced frameworks, measurement approaches, and a substantial body of evidence about what separates interventions that stick from those that don't. It's called implementation science.

Implementation science is not a set of tips you read and then go execute. It is a research discipline with trained practitioners, validated methods, and a growing workforce of specialists who do this for a living. You wouldn't ship code without engineers. You shouldn't ship implementations without implementation expertise. Health tech hasn't figured this out yet, and it shows.

## A Field That Studies Your Problem

Implementation science studies the methods and strategies for getting evidence-based practices into routine use. If that sounds academic, consider the practical version: it's the science of why things that work don't get used, and what you can do about it.

The field grew out of a frustrating reality in healthcare. Research consistently produces interventions that improve outcomes, and healthcare organizations consistently fail to adopt them. The distance between what the evidence supports and what clinicians and systems actually do is called the "know-do gap." **On average, it takes seventeen years for research evidence to become standard practice. Only about half of proven interventions ever achieve broad uptake**. If you've watched a product with strong outcomes data die on the vine, you've lived in that gap.

There's a useful way to think about the spectrum of research that applies here, drawn from the work of Bauer and Kirchner. On one end, research that asks *is the thing safe?* In the middle, research that asks *does the thing work?* On the far end, where implementation science lives, research that asks *how do you help people actually do the thing?* Most health data companies have invested heavily in the first two questions. Almost none have seriously engaged with the third.

This isn't to say the fields have never intersected. Some health tech companies have partnered with implementation researchers, typically by lending their products for academic study. But there's a difference between having your product studied by an implementation scientist and actually using implementation science to design your rollout. Most of those partnerships have been research collaborations, not operational ones. The science has been applied to the product after the fact, not built into how it gets deployed.

One objection you may already be forming: implementation science grew up in clinical and public health settings where timelines stretch over years, and your product cycles move in weeks. That's a real tension. But it's not a reason to ignore the discipline. The frameworks and diagnostic approaches translate to faster-moving environments. The timelines for applying them can be adapted. What can't be shortcut is the underlying insight: that the environment your product lands in matters as much as the product itself, and understanding that environment is a skill, not a guess.

Implementation scientists have developed frameworks to make this work systematic rather than ad hoc. Different frameworks serve different purposes: some guide the implementation process, some help you evaluate whether it's working, some help you explain why it did or didn't. The choice depends on the question you're trying to answer. For this piece, I want to focus on one that maps most directly onto how a product team thinks about deployment.

## Five Domains That Determine Whether Your Product Survives

The Consolidated Framework for Implementation Research, or CFIR, identifies five domains that shape whether an intervention succeeds or fails in practice. It was developed by Laura Damschroder and colleagues, **published in 2009** and **updated in 2022**. Think of it as a diagnostic lens: a structured way to look at a deployment and understand where the stress points are

| CFIR Domain | What It Covers | Where Health Tech Gets It Wrong |
|---|---|---|
| The Intervention | The product itself: its evidence base, relative advantage, complexity, and how much of it can be adapted to fit local needs without breaking what makes it work. | Over-indexing here. Companies optimize the product and treat the other four domains as someone else's problem. |
| Outer Setting | The world beyond the organization: regulations, payer incentives, market dynamics, the policy landscape. | Assuming a stable regulatory environment. TEFCA, information blocking rules, and state privacy laws are actively reshaping what's required and rewarded. |
| Inner Setting | The implementing organization: its culture, leadership dynamics, staffing capacity, and readiness for change. | Not assessing it. Vendors discover post-contract that the IT team is overextended, the workflows they assumed don't exist, and the executive sponsor can't move the frontline. |
| Individuals | The people whose behavior has to change: their knowledge, beliefs, confidence, and relationship to the organization. | Calling it "resistance." IS reframes it: when people don't use a tool, that's a signal about the implementation design, not a character flaw of the end user. |
| Implementation Process | How the rollout is planned, executed, monitored, and adjusted over time. | Treating it as a project plan: milestones, go-live, training, handoff. IS treats it as a learning system requiring ongoing facilitation and adaptation. |

Look at that table and ask yourself honestly: which of those five domains does your organization actively design for? If the answer is mostly the first one, you're in good company. But you're also looking at why your rollouts keep failing in ways your product team can't explain.

If you're thinking *"we already invest in this, it's called user research,"* that's worth addressing. Many health tech companies have made real investments in human-centered design and UX research. That work matters, and it addresses real problems. But it typically focuses on one CFIR domain: the intervention. UX research helps you build a product that's usable. Implementation science helps you understand why a usable product still doesn't get used. The gap between a well-designed interface and sustained adoption in a complex health system is precisely where implementation science operates, and it's a gap that human-centered design alone was never built to close.

### You're not the first industry to hit this wall

Pharma got here a decade before you did. Companies spent billions developing drugs that performed well in clinical trials and underperformed in real-world settings, because adherence, provider behavior, and health system context all intervened in ways the trials didn't capture. The "if you build it, they will come" fantasy turned out to be exactly that. So pharma started investing in implementation science, not out of altruism, but because failed implementation was destroying revenue. Companies that have embraced the approach are embedding implementation scientists in their evidence-generation teams, using hybrid trial designs that **measure real-world adoption** alongside clinical effectiveness, and **collaborating early with providers and payers to design for real-world applicability.** [**Messina 2025**; **Olson et al. 2024**] The interest is real. The depth of expertise is still uneven. But the direction is clear, and the investment is growing.

Health tech is sitting where pharma sat fifteen years ago. The difference is that health tech doesn't have to learn this from scratch. The evidence exists. The trained practitioners exist. The question is whether the industry will seek out that expertise or keep diagnosing every failed deployment as a "change management" problem and moving on.

## What It Looks Like When Implementation Is Designed, Not Improvised

It helps to see this in practice. Not a health tech case (the field hasn't produced many rigorous ones yet, which is itself part of the problem) but a healthcare implementation that involved the same challenges health data teams face: EHR integration, workflow redesign, clinician behavior change, and scaling across diverse organizations.

**AHRQ's EvidenceNOW** initiative built a model for helping primary care practices implement research findings into routine care. One application of that model, called **Managing Urinary Incontinence (MUI)**, tackled a problem with a familiar shape: **urinary incontinence affects more than half of women over 20, effective non-surgical treatments exist, and yet fewer than 30 percent of women over 40 with symptoms report receiving any care.** The evidence was there. The treatments were proven. Nobody was using them.

The implementation teams didn't just build a tool and hand it over. They designed the rollout as a multi-layered process, with trained implementation specialists (called practice facilitators) working directly inside practices over time. Here's what that actually looked like on the ground.

**They started with the EHR, but didn't stop there.** Teams built screening prompts and clinical decision support directly into the electronic health record. But they knew that putting a prompt in the system doesn't mean anyone will use it. So they paired the technology with hands-on work to change how the practice actually operated around it.

At one health system, the facilitators observed that the standard patient intake process had no natural moment for a UI screening question. Front desk staff weren't going to add it to their workflow on their own, and clinicians were already behind schedule before the patient reached the exam room. So the team leveraged the system's existing automated pre-visit questionnaire, sent 48 hours before appointments, to embed the UI screening question. The EHR would then surface the result to the clinician at the right moment in the visit, rather than adding another task to an already overloaded encounter.

But here's what made this an implementation problem, not a technology problem: the pre-visit questionnaire was working as designed, and it was still missing half the patients. Some didn't complete it. Some didn't have the portal access. The technology alone couldn't close the gap. So the implementation team went back into the practice and redesigned the intake process. Medical assistants became the critical bridge: during rooming, they provided a brief screening form to any patient flagged as not having completed the pre-visit questionnaire. The MAs filled the gap between what the technology could reach and what the practice's patient population actually looked like. That's not a UX fix. That's implementation design: understanding how a real operational environment interacts with a tool and adapting the strategy around it.

**They didn't assume the technology would change clinician behavior on its own.** At another set of practices, primary care providers simply were not screening for UI, regardless of what the EHR prompted them to do. The implementation team worked with the health system to modify and redesign the EHR alert system. But that alone was not enough. They partnered with a renowned urogynecologist to present at individual practices on the importance of screening, bringing clinical authority that carried weight with skeptical providers. Then they went further: individual training sessions for primary care providers on treatment options for urinary incontinence, so that clinicians felt comfortable presenting options to their patients. These sessions also became a space to address provider concerns about stigma around the topic, a barrier that no EHR prompt could have surfaced or solved.

**When adoption stalled, they didn't send a reminder email.** The implementation teams continuously went back into practices to address barriers that providers encountered: a staffing change that disrupted the workflow, a competing initiative that pulled leadership attention, a screening step that wasn't sticking because of how exam rooms were set up. They worked with each practice to ensure that training continued and that emerging obstacles were addressed in real time. This wasn't troubleshooting. It was systematic implementation management, sustained over months.

Only after the facilitation teams had built this operational foundation, with data showing that providers were seamlessly screening and treating, did they pivot to scaling the EHR changes more broadly.

This is the critical point for a health tech audience: **the technology was necessary, but it was one component of a designed implementation.** The screening prompts in the EHR worked because they were wrapped in a strategy that addressed how the practice actually functioned, how the clinicians actually felt about the change, and how the rollout was managed and adapted over time. Every one of those layers maps to a CFIR domain. Take any one of them away and the results change.

Across all MUI sites, the **results were substantial**. The original goal was to reach 38,500 patients. The teams reached 134,852.

Now picture what most health data deployments look like instead. You build the EHR screening tool. You sell it to practices. You run a training session. You leave. Six months later, adoption has cratered and you blame the practices for not being ready. That's not hypothetical. It's the default.

The difference between these two scenarios is not the technology. It's the implementation expertise wrapped around it. And that expertise didn't come from the practices themselves. It came from trained specialists who knew how to diagnose implementation barriers, design strategies to address them, and adapt in real time as conditions changed. **The practices could not have done this on their own. Neither can your customers.**

## What This Means for How You Work

The implications differ depending on where you sit. But they converge on the same point: implementation science is not something you can read a white paper about and then go do. It is a discipline that requires trained expertise. What follows is what each role can start doing differently, and where you will need help.

### If you lead product or engineering

Your instinct when a rollout fails is to look at the product. Was the UX confusing? Was the integration brittle? Were there performance issues? These are worth investigating, but they're usually not the whole story. CFIR would tell you to look at the inner setting and the implementation process before you look at the intervention.

One practical starting point: after your next underperforming rollout, map what happened against the five CFIR domains. Was it an inner setting problem, rooted in the organization's readiness, staffing, or competing priorities? An outer setting problem, driven by regulatory shifts? An individual-level problem, tied to end-user beliefs? A process problem, stemming from how the rollout was managed? You will almost certainly find that the root cause wasn't the product. And you'll start building a pattern library that transfers from one deployment to the next.

But recognizing the patterns is the easy part. Designing implementation strategies that address them is a specialized skill. You can learn to see the inner setting. You will need someone with implementation expertise to help you *design for it.*

### If you're a vendor executive

Your go-to-market motion almost certainly treats implementation as a post-sale function. Customer success handles onboarding. The sales team moves on. Revenue attribution flows to the deal, not to the deployment.

The strongest evidence in implementation science points to the pre-implementation phase, the period between the decision to adopt and the go-live, as the highest-leverage moment for long-term success. This is when you assess organizational readiness, identify barriers, engage stakeholders beyond the buyer, and co-develop an implementation plan that accounts for local context. Most vendors skip or rush this phase because it doesn't generate revenue and it slows time-to-go-live.

The math almost always favors the upfront investment. The cost of failed implementations, measured in churn, reputation, and the reference-ability of your customer base, compounds in ways that are hard to see on a quarterly dashboard but devastate your unit economics over time. Implementation competence is not an additional expense. It's a retention and expansion strategy.

But building that competence requires more than reorganizing your customer success team. Assessing organizational readiness is a methodology, not an instinct. Designing implementation strategies that account for inner setting, individual behavior, and process management is what implementation scientists are trained to do. *If you don't have that expertise in-house, you need to find it.*

### If you're evaluating health data products as a buyer

You already know that buying good technology doesn't guarantee good outcomes. But your procurement process probably still over-indexes on product capabilities and under-indexes on implementation support.

Ask vendors different questions. Not "what does the product do?" but "what does the implementation require?" Not "do you have case studies?" but "in the deployments that didn't work, what went wrong and what did you change?" Ask them to describe their readiness assessment process, their approach to adaptation, how they measure whether an implementation is actually working. If they can't answer, that tells you how much of the implementation risk you'll be absorbing.

And turn the lens inward. Does your organization have the staffing, workflow capacity, and leadership engagement to support a genuine implementation? If your IT team is stretched across three other technology transitions and your clinical leadership is distracted by a merger, that's not a good time to deploy a new data product, regardless of how good it is. Knowing that before you sign the contract is worth more than any vendor demo.

But here, too, there is a limit to what you can do alone. Evaluating vendor implementation readiness, assessing your own organizational capacity, and designing an implementation plan that accounts for context: these are practiced skills. *The expertise exists. You need it at the table.*

## The Expertise Exists. Here's Where to Find It.

The gap between what health data products can do and what organizations can operationally absorb is the defining tension of this moment in health tech. It is not closing on its own. And as this piece has argued, it will not close by building better products alone. It requires a kind of expertise that most of the health data industry hasn't engaged with yet.

That expertise exists. There are researchers who have spent careers studying why health innovations succeed or fail in complex delivery environments. There are trained practitioners who specialize in diagnosing implementation barriers and designing strategies to overcome them. There are organizations, including AcademyHealth, that sit at the intersection of this research and the industries that need it.

This piece has introduced one framework, CFIR, and one way of thinking about why health data products fail. There is much more to the field: validated approaches for measuring whether an implementation is working, strategies for designing rollout plans that adapt to context, methods for distinguishing productive local adaptation from changes that undermine your product's core value. We intend to go deeper on these in future work.

**Health Datapalooza 2026** is built around exactly this collision: putting the people who study how innovations succeed or fail in complex health systems in the same room as the people building those innovations. Not a panel where one group presents to the other. Working sessions where product leaders bring their real implementation challenges and researchers bring the evidence and methods to help solve them. If you've read this piece and recognized your own deployment failures in it, the people who can help you build a different outcome will be there.

**Health Datapalooza 2026** takes place September 24–25, 2026, at the Ronald Reagan Building and International Trade Center in Washington, DC. Registration opens June 8.

## Further Reading


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