FRAMEWELL
Patient-First Healthcare Is Finally Possible

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For the purposes of better communicating my thesis, I want to clarify the meaning of a term I will use throughout this white paper: ***the Patient-Healthcare Experience****. Anytime I mention this, I am referring to any part of healthcare experienced from the patient's perspective — including, but not limited to, securing health insurance, finding providers, scheduling treatments, understanding bills and paying, keeping track of medical-records/ allergies/medications/etc., and submitting appeal claims against bills.*

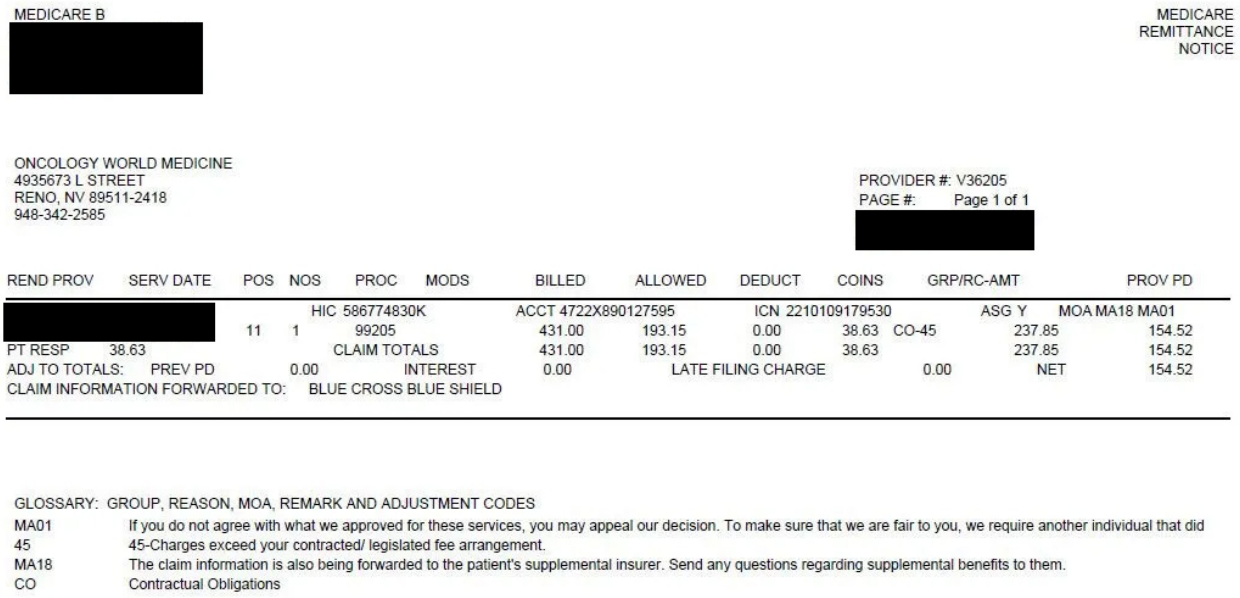
Abstract

Most people that disagree on many things, would likely still agree on this: that out of all the various major systems that the country is made up of (Transportation, Commerce, Education, etc.) that the most important one — meaning, the one that needs to be the most well-structured — is healthcare. And yet, despite this being something such few would argue with, it somehow has fallen to the bottom of the rankings. How can the most important system, the one that ought to be well-structured the most, be perhaps the most chaotic and messiest? And now with AI, healthcare will likely see some notable advancements in drug discovery, procedure and diagnosis capabilities, medical equipment upgrades, and more — which is wonderful. However, if the gap between what the average American understands about their own healthcare and the capability of healthcare itself is this bad in the present, then there is justified worry that this gap will only increase if something isn't done about it.

The Problem We Are Not Allowed To Talk About

The Loewenstein et al. 2013 *Journal of Health Economics* paper found only 14% of insured Americans could correctly define deductible, copay, coinsurance, and out-of-pocket maximum. The JAMA 2019 Shrank et al. study revealed administrative complexity waste at $265.6B/year within total US healthcare waste of $760B—$935B. The Center of Healthcare Strategies has done recent studies that reveal that 9 out of every 10 insured Americans struggle with healthcare literacy.

If you need any more proof beyond the stats that prove how failed of a system that healthcare in America is, tell me: if your life depended on it (but you couldn't use the internet or ask for help) could you accurately identify what each part of this medical bill meant?



MEDICARE B [redacted]

MEDICARE REMITTANCE NOTICE

ONCOLOGY WORLD MEDICINE
4935673 L STREET
RENO, NV 89511-2418
948-342-2585

PROVIDER #: V36205
PAGE #: Page 1 of 1 [redacted]

REND PROV	SERV DATE	POS	NOS	PROC	MODS	BILLED	ALLOWED	DEDUCT	COINS	GRP/RC-AMT	PROV PD
[redacted]				HIC 586774830K		ACCT 4722X890127595		ICN 2210109179530		ASG Y	MOA MA18 MA01
		11	1	99205		431.00	193.15	0.00	38.63 CO-45	237.85	154.52
PT RESP 38.63				CLAIM TOTALS		431.00	193.15	0.00	38.63	237.85	154.52
ADJ TO TOTALS:	PREV PD		0.00	INTEREST		0.00	LATE FILING CHARGE		0.00	NET	154.52
CLAIM INFORMATION FORWARDED TO:	BLUE CROSS BLUE SHIELD										

GLOSSARY: GROUP, REASON, MOA, REMARK AND ADJUSTMENT CODES

MA01	If you do not agree with what we approved for these services, you may appeal our decision. To make sure that we are fair to you, we require another individual that did
45	45-Charges exceed your contracted/ legislated fee arrangement.
MA18	The claim information is also being forwarded to the patient's supplemental insurer. Send any questions regarding supplemental benefits to them.
CO	Contractual Obligations

Every American adult has had this moment: a bill arrives, you open it, you stare at it for thirty seconds, and you put it down. Multiply that moment by 330 million people and you have the American healthcare consumer experience. A receipt from a coffee shop tells you what you bought, what it cost, and what you paid. A receipt from a hospital tells you none of these things, and is forty pages long. Employer-sponsored insurance solved one problem — wartime wage controls — and created another: the person paying for your care is not you, the person choosing your plan is not you, and the person who has to read the bill afterward is, somehow, still you.

This is not sustainable. Eventually, this system will fail if we don't do something about it. And the ones who will pay for it are the ones who need help the most. Everybody knows this is a problem. Find me one person who honestly believes that healthcare in America is a properly-functioning system — you can't.

And perhaps the most frustrating part is that it isn't some big mystery of what the Optimal Healthcare Management System looks like — most people probably agree on that — which means that all we have to do is build it. Here's what I mean (in part):

- If a person needs a medication, the system would be set up so that they A) do not have to wait or perform any steps of their own in between their provider issuing their medication and them picking it up; and B) they should be able to see where the

cheapest location in the patient's preferred radius that that medication can be purchased, given their insurance provider's benefit package, instantly

- If a person moves to a new city, or switches insurances, or jobs — or for whatever reason needs a new provider or providers because their previous providers are no longer in network or within a reasonable distance, then they should be able to have a list of providers for each of their current healthcare needs provided to them, on-demand at any time, that are in network, with filters such as each provider's distance from patient, "new patients accepted" status, costs associated for whatever healthcare service is needed (per the patient's insurance), quality of care to be expected (per other patient reviews) — and then be able to schedule appointments in a hassle-free way.
- If a person wants any medical record in their healthcare history, they should be able to know exactly where to go to access that record, how to get access to it, and get access to it successfully without hassle
- If a person is overcharged for their healthcare services received, they should not be responsible for having to catch the overcharge themselves, and should also have a clear understanding of how to get reimbursed
- If a person is confused about any medical document (Bill, Explanation of Benefits, X-Ray results, etc.) they should have a quick and easy way to get clarification, regardless of their level of tech-savviness, regardless of their medical condition, regardless of how much free time they have
- If a person is trying to figure out the best health insurance for them personally, they should be able to find out what that is very quickly, with the results being created in a way that caters not just to the patient's general demographics (income-level, age, location), but with specifics about the healthcare needs of that patient, what types of services they would need that year, what medications they would need, etc.
- If a person needs a new procedure or treatment or healthcare service that their current providers do not cover, they should be able to find the provider that would best perform that healthcare service, based on that provider's distance to the patient, availability, cost, etc.

Find me someone who would disagree with any of that — you can't. And none of that is beyond the level of technology that we have the capability of creating. Nothing I listed above would be a miracle, or anything close. And this isn't "new thought" — I guarantee if you would've asked the same question in 1980, you'd get the same bullet points I listed above.

But that's not what we have, and it's embarrassing what we have to deal with here in America alternatively to what I mentioned. Instead, this is what the Patient-Healthcare Experience is for the average American:

- A person needs medication, and defaults to the pharmacy closest to them, because they don't have the time to find the cheapest one. Then when they get there, they are told they need to come back after they get prior-authorization. After that 2-week

process, they return, and find their medication to be more expensive than they thought.

- A person needs new providers, and so they scroll their insurance's outdated Provider-Search-Portal for hours trying to find providers, cross-referencing with google reviews, searching their addresses on Google Maps to keep track of distances, calling each Providers office to find out if they are truly in-network, getting told by the ones that are in-network that there is limited availability for new patients — and then eventually ending up with a provider that they don't like.
- A person needs a medical record, but has no idea where to find it. They call their insurance, provider, etc. — but eventually give up because it's taking too long.
- A person is overcharged for a medical bill, and never realizes it. (If you don't believe this one is true — Per the Kaiser Family Foundation, despite appeal letters resulting in favor of patients roughly 41% of the time, only about 0.1% of patients file appeal letters).
- A person is confused about a medical document, and spends endless hours google searching and calling people trying to get an explanation.
- A person is trying to figure out the best insurance for them, but is either told which one to pick by their university, employer, etc. — that is not catered whatsoever to their specific healthcare needs, or they chose a health plan they incorrectly thought was catered to them.

This probably sounds more like the American healthcare system we all have come to know. Messy, chaotic, embarrassing. And notice what the big difference between the "desired" system vs. the "real" system — one word: **personalization**. This is the key word in what's missing from the Patient-Healthcare Experience. And it's because it is perhaps the industry where personalization is needed the most.

When our society changed to a digital / electronic way of life, some sectors and industries advanced to a level that doesn't have much criticism. For example, look at automobiles. This system exists with little flaw. Why? Because it doesn't need personalization anywhere near the level healthcare needs. Everyone drives the same roads, everyone drives the same cars (for the most part, obviously some cars have better features than others, but they all do the same thing), everyone abides by the same speed limits, etc. Healthcare does not have this luxury. To achieve true personalization, which is the key to being patient-first, healthcare needs to do better.

Asymmetry

What's interesting about the Healthcare System in America is that there are 3 main players in the game (or 4 if you include the Government): The patients, the providers/doctors/pharmacies, and the Payers/insurance companies/employers. The root

cause of all these problems I've mentioned lies in the asymmetry between the 3. Let me state 5 undisputable facts:

1. Your insurer knows what is covered. Your provider knows what was billed. You know nothing, and yet you are the only one with money at stake (meaning, you are the only one who, in theory, loses money in this triangle).
2. In every other major American market — homes, cars, restaurants, airline seats — the consumer has access to the price before they buy. In healthcare, you find out what it cost after you have already had the treatment, service, diagnosis, etc.
3. A patient walks into a hospital with two questions: what is wrong with me, and what will it cost. The hospital has answers to both. The patient is told the first and not the second.
4. We have built a system in which the only party not invited to the conversation is the one writing the check.
5. The phrase "let me check with my insurance" is the most expensive sentence in the English language.

The triangle is unbalanced. The payers have the money. The providers have the skill. The patients have the problems. The only reason this cycle "works", is that what I just mentioned never changes. The patients will keep having healthcare needs. The providers will continue to have skill as new doctors replace retiring doctors every day. All the while, the payers get more and more money. In theory, this sounds good, but not if there is a lack of transparency between the parties involved, and not when there is significantly more systematic confusion lying consistently on one of the three parties (and especially when it's the one of the three parties that lose the most money).

Why A Solution Doesn't Exist

True patient-alignment in healthcare can only work if it's structural, not aspirational. A company whose main goal is to make money cannot add on "help make the Patient-Healthcare Experience be truly patient-aligned" as a sub-goal — it cannot be aspirational. It needs to be structural, it needs to be built into the system from a foundational level.

Some currently existing tools might be wrongfully mistaken as being foundationally patient-aligned. Here are some examples:

Tool	What it does	Who pays for it	Core limitation / conflict of interest	Verdict
MyChart	Patient portal for hospital communications, appointments, and records	Hospital / health system (Epic's customer)	Built to reduce call volume, improve discharge rates, and boost institutional satisfaction scores — not to serve the patient's interests	Not patient-first

Tool	What it does	Who pays for it	Core limitation / conflict of interest	Verdict
GoodRx	Prescription discount coupons at the pharmacy counter	Pharmacies & PBMs (pay per referral)	Only covers medications; no connection to insurance, deductibles, claims history, or EOBs. Revenue model directs patients to specific pharmacies, not the best overall outcome	Not patient-first
Insurance apps	In-house member portals offered by insurance carriers	Insurance company	Designed to retain subscribers and reduce churn to competing insurers — not to help patients navigate care in the patient's best interest	Not patient-first
Goodbill	Bill review and dispute service to reduce healthcare costs	Patient (% of savings recovered)	Only acts after bills arrive — deliberately excludes pre-visit cost prevention because that functionality generates no revenue. Profit model removes the most patient-aligned feature	Not patient-first
Employer nav tools (Accolade, Quantum Health, Health Advocate)	Workplace health navigation benefits offered by employers	Employer	Goal is to reduce plan costs and maintain workforce productivity. Interests sometimes align with the patient's, but when they conflict, the tool is structurally obligated to serve the employer	Not patient-first
ChatGPT / LLMs	General-purpose AI assistants used for health questions	User / subscription	FHIR integration exists ONLY if clinical data is shared (lab results, medication lists, allergy lists, x-ray imaging, doctor's visit summaries, etc.)	Not patient-first

This is not to dismiss these tools or their creators as bad people, my point is not that these tools are "wrong" or "greedy" — my point is that these tools literally cannot achieve true patient-first personalized healthcare, given the core of what they exist to do. If the Patient-Healthcare Experience is not the nucleus, then it's virtually impossible to optimize. Every one of these tools was built by people who genuinely wanted to help. Every one of them is structurally incapable of doing so. Good intentions are not architecture. A tool that works for the patient must work *only* for the patient. There is no version of this where you serve two masters.

The reason is not effort or competence; it is structural. A tool funded by health systems will never tell you the hospital miscoded. A tool funded by insurers will never tell you the denial was wrong. A tool funded solely by contingency fees on harm cannot prevent harm. A patient-aligned, patient-first tool must be patient-funded or platform-funded in a way that makes the patient the only customer whose interests matter. This is the heart of the thesis.

Regulatory

For the "Optimal Healthcare Management System" that I referred to earlier, to exist, 5 regulatory checkmarks needed to all happen first. That list is:

1. Patients healthcare records needed to be digitized in a safe, regulated system
2. Patients (and third-parties representing them) needed to have legally-protected access to these records
3. Patient's digital health records would need to be accessed in a programmatic and standardized way (meaning, in a way that could be accessed in seconds digitally)
4. Negotiated rate benchmarks between payers and providers would need to accessible in the same programmatic way
5. Healthcare coverage eligibility between payers and patients would need to be accessible in the same programmatic way

I want to begin this story at the very beginning of the country's history, and quickly walk us from then until now, because perhaps seeing the full evolution will be the best way to ensure that the core problem is automatically comprehended.

For many decades, America followed the same Colonial System it did pre-revolution: the government did not have any bodies dedicated to public health. There were no hospitals (not in the sense of what we consider to be a hospital on a functional level). Only 2 medical schools opened up in America's first 30 years (Harvard and Dartmouth). Towns and villages had self-operating doctors, that made house calls,.. The first government "healthcare coverage" was created in 1798 — when Congress created a fund to pay for merchant seamen's' maritime healthcare costs (paid for by taxing the very same merchants). This was the most limiting the Patient-Healthcare Experience could be.

The second era began in the 1840s, when Lemuel Shattluck (a Boston Congressmen) drafted a state bill that got passed: it ensured that government bodies would keep detailed records of demographics, including cause of death (which meant they had to have a government-mandated list of diseases and illnesses). Most states adopted shortly after. In addition, he sparked a political movement that created governing bodies and departments specifically aimed at keeping cities clean to eliminate public health crises. Faith-based hospitals began popping up all over the country. All the major universities had medical schools. The first private "healthcare coverage" was created by a company in Massachusetts that covered accidental healthcare costs for steamboat and railway work injuries. In 1866, New York City created the Metropolitan Board of Health — the first public health governing body in the nation (most cities created their own shortly after). These bodies created, executed, and judged ordinances pertaining to public health. At the turn of the century, many for-profit hospitals, public hospitals, and government hospitals were created. The Patient-Healthcare Experience described here is often considered to fall under the "Anglo-American" healthcare system, where healthcare was grounded in

agreed-upon doctrines, future-planning for healthcare needs, and the patient being responsible for all costs and management of healthcare.

The third era began in the 1920s after the first World War. Due to the healthcare needs of returning soldiers and the influenza, hospitals had begun requiring pre-care payments. This led to organizations like Blue Cross being founded, which laid the groundwork for the private health insurance companies we know of today. It was during this time that the first employer-sponsored healthcare programs began. Unfortunately, healthcare costs rose. There was, for the first real time, a public outcry for government assistance in healthcare. The main opposition was organizations like the American Medical Association, the Chamber of Commerce, and many labor unions, who fought hard to keep the government out of healthcare. When the Great Depression hit, the government needed to intervene and government-relief agencies were formed that included healthcare coverage assistance — though these were meant to be short-term solutions. In fact, FDR famously denied including any government-healthcare programs in the New Deal.

Then, on July 30th, 1965 — Lyndon B. Johnson signed an act amending FDR's original Social Security Act, and the fourth era was created — arguably, the era we exist in today. On that day, Medicare and Medicaid were created — publicly run insurance for the elderly and the poor (and certain disabilities/diseases). In 1973, responding to the rising healthcare costs, Nixon's HMO Act made it a federal law that all employers that offered insurance (with 25+ employees) must provide health insurance to all employees, specifically on HMO plans (and he cushioned it with billions of dollars from the government to help cover the costs). During the following decades, health records became digitized, new health care plan types arose (PPO, CHIP, etc.) and healthcare costs rose as groundbreaking vaccines, drug discoveries, and advancements in hospital-tech became more and more common. In the 1990s, HIPAA was created under Clinton. Under this law, the groundwork for a safe digitized healthcare system was created, as well as the standards for Healthcare coverage eligibility (which would be federally-mandated in 2012 under Obama).

In 2009, our first of 5 regulatory checkmarks happened — the HITECH Act was brought into law under Obama, which made providers and health systems digitize all patient records with HIPAA approved-standards, or face federal penalty.

In 2012, our second of 5 regulatory checkmarks happened — HIPAA established the ASC X12 Version 5010 standards, which mandated healthcare coverage eligibility transactions between payers and patients would need to be accessible, open-sourced, to the public.

In 2016 (though it didn't come into effect until 2021), our third of 5 regulatory checkmarks happened — the 21st Century Cures Act was brought into law under Obama, it became illegal to block patients (or third-parties representing them) from accessing their Electronic Health Records.

In 2020, our fourth of 5 regulatory checkmarks happened — the CMS passed rule CMS-9115-F, which established an API system where patients (and third-parties representing them) could have easy programmatic access to FHIR Claims Data. Though this only covered the 25-30% of the population on CMS-related healthcare plans, most other healthcare entities followed suit soon after.

And finally, in 2024, our fifth and final of 5 regulatory checkmarks happened — the Transparency in Coverage Final Rules, became "in full effect", which required payers to release, monthly, all negotiated rates with both in-network and out-of-network providers to the public in a downloadable format.

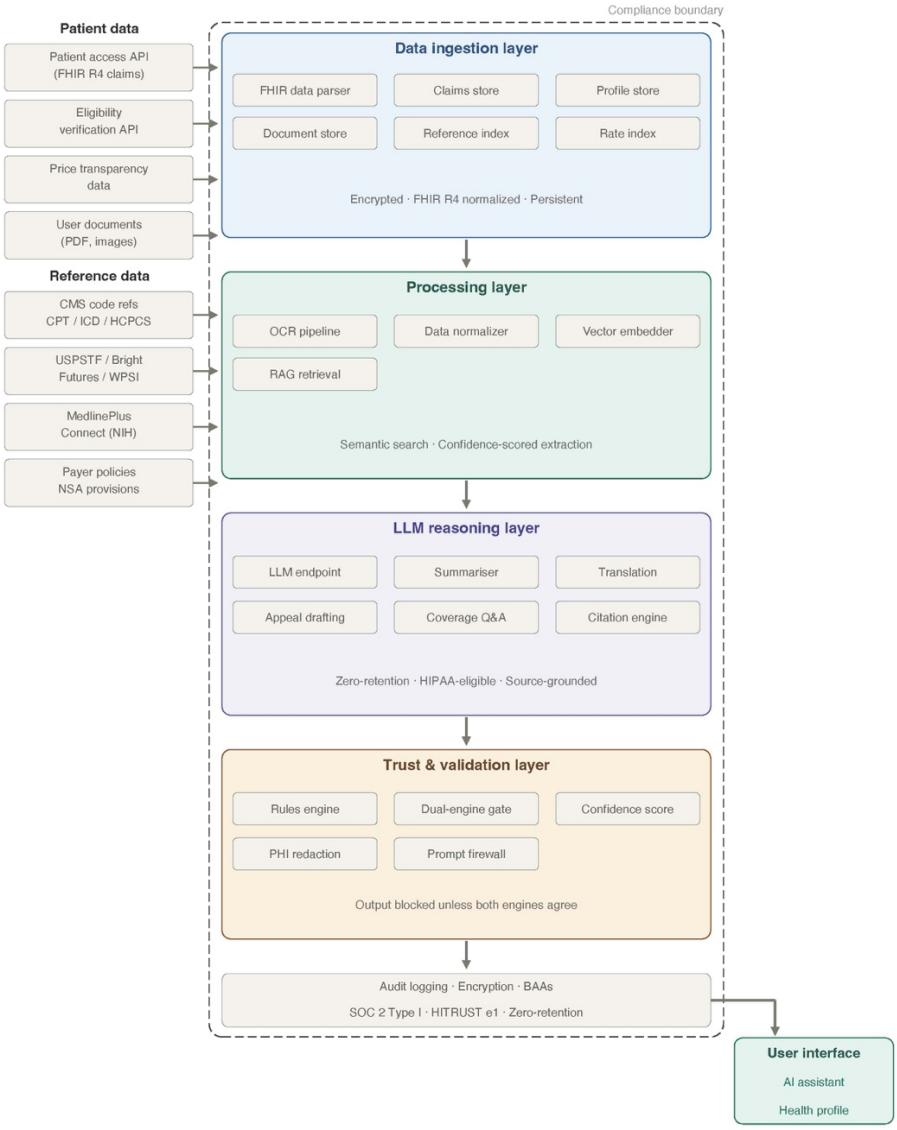
And so "Optimal Healthcare Management System" is finally possible, the Patient-Healthcare Experience is finally optimal, from a regulatory-standpoint. The technology exists. It just needs the right ecosystem to be created (something like Pittsburgh would work well, considering its unique combination of high-performing technology AND healthcare sectors.

What The Solution Would Have To Look Like

Before I present the architecture, I want to mention what I believe the user needs to experience as well for "Optimal Healthcare Management System" to actually live up to its name:

- It must work for you. Not "you too." Not "you among others." You. Patient alignment is not a feature. It is the architecture.
- It must see what you see, not only what is hidden from you.
- It must speak English. Not insurance English. Not hospital English. Real English, at the reading level you actually read at, without making you feel small for needing it explained.
- It must be there for you before, during, AND after care.

Regarding the architecture, achieving the solution would look like this:



Conclusion

I do not believe that understanding your own healthcare should require a law degree, a medical degree, or an afternoon on hold. That is the bar. It should not be revolutionary, and the fact that it is tells you everything you need to know about the system we are replacing. I listed what the system should look like. I listed what it actually looks like. The distance between those two lists is the reason Framewell exists. We intend to close it. The law made it possible. The technology made it buildable. The only thing left was to actually build it. So that's what we're doing.

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