



— CASE STUDY · REVISED OCTOBER 2026

How Agnos delivered a web and mobile app that puts a health plan's data in its members' hands

The Agnos My Health Record App: CMS interoperability compliance for payers, built on FHIR, Okta and AWS, with coverage, claims, clinical records and wearable data in one place. Updated with what AI now makes of that data for members and plans.

Client

Health plans served through the Inovalon ONE® Platform Consumer Health Gateway™

Engagement

Product definition, web and mobile build, FHIR integration, identity and security

Platform

React and Angular, Material UI, AWS CloudFront and S3, Okta OAuth 2.0, FHIR APIs

"A member who can see their own coverage, claims and clinical record in one place is the floor, not the ceiling. What a plan does with that record, and whether its members trust it, is the whole game."

SAMUEL SALOMON LEVY, FOUNDER AND CEO, AGNOS

THE CHALLENGE

Data-driven healthcare: a new standard, and three parties who could not meet it

Agnos delivered a web and mobile application that lets payers comply with the CMS interoperability standards and gives members their own coverage, claims and clinical data. It uses that data to:

- Facilitate compliance with the CMS interoperability and patient access rules.
- Give payers a web- and mobile-based tool that provides members with their coverage and network information together with their encounters, claims and clinical data.
- Find opportunities to manage risk and care gaps through external health apps and wearable devices such as Fitbit.

The problem each party faced

PATIENTS**Repeating their story**

Patients repeat their medical history to one provider after another, struggle to access their own records, endure slow claims processes and carry unmanaged care gaps and risks.

PAYERS**Fragmented, inconsistent data**

Payers cannot easily see patient information across providers, lack interoperability with other payers, and struggle with care gaps, risk, data standardization and data integrity.

PROVIDERS**Administrative overload**

Providers cannot see information held by other providers and payers, while balancing patient care against ever-growing administrative, clinical and regulatory demands.

All of this results in poor patient experiences and poor outcomes. The data to fix it existed; it never reached the people who needed it.

The regulation that changed the standard

The US government responded with the CMS Interoperability and Patient Access final rule (CMS-9115-F), published in 2020 under the MyHealthEData initiative, with API enforcement from July 1, 2021. Under the rule:

- Payers must make a member's claims and encounter data available to the member through a user-facing interface.
- Payers must also make a member's clinical data available, including but not limited to conditions, medications, allergies and laboratory results.
- Medicare Advantage, Medicaid and CHIP programs and managed-care entities must publish provider directories through a Provider Directory API at a public endpoint on the payer's website.
- Part D Medicare Advantage plans must expose formulary information through the Patient Access API; Medicaid and CHIP programs must expose preferred drug lists.

OUR APPROACH

One app for coverage, claims, clinical records and the devices members already wear

Agnos responded to the interoperability and patient-access challenges, and to the CMS-9115-F rule, by building the Agnos My Health Record App with the following capabilities:

- **Plan and coverage information**, with a digital membership card and the payer's contact details.
- **Services used**, with the explanation of benefits for each.
- **Detailed service breakdown** and adjudication information for every claim.
- **Pharmacy and provider network search**.
- **Clinical records**: conditions, medications, allergies and labs.
- **Fitbit integration** for real-time vitals, with the ability to interface with other health-monitoring devices.
- **Correlation of real-time vitals** with current conditions, medications and other clinical information, to detect and notify about risk.
- **Secure sign-in** through the plan's own identity provider.



The app's capabilities: data, monitoring, network search, records, always-on access and integration, built around one member record.

What it delivers for a payer

- The ability to integrate, merge and map clinical and claims data to industry standards.
- Adherence to specific security standards, application authentication and consumer validation.
- The ability to meet implementation deadlines immediately and respond rapidly to member requests that are no longer merely expected but required.
- A member experience that turns a compliance obligation into a reason to stay with the plan.

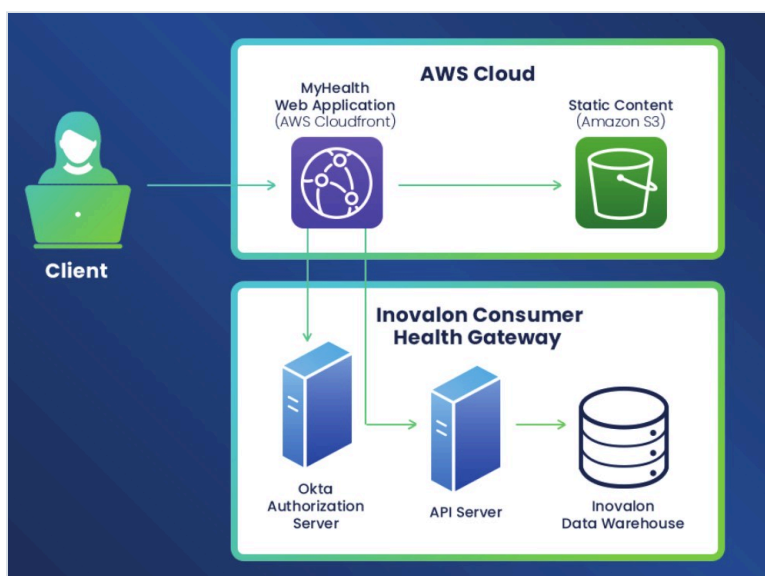
TECHNOLOGY, SECURITY AND INTEROPERABILITY

Built on FHIR, delivered from the cloud, secured by the plan's own identity

The web app is a JavaScript application built with the React framework. It uses the FHIR API to communicate with FHIR-enabled servers and retrieve medical records for end users, and is deployed on AWS CloudFront, Amazon's content delivery network, with static content on Amazon S3.

The app works with any cloud platform built on the FHIR standard, including the Inovalon ONE® Platform Consumer Health Gateway™, so that a payer's health plan data is accurate, complete and easily accessible, and the plan can respond quickly to member requests. Agnos teamed with Inovalon, a world-class healthcare data company, to harness the power of data and technology to improve healthcare.

Authentication and authorization are handled by Okta using the OAuth 2.0 protocol. OAuth 2.0 lets a health plan authenticate its users securely through federation with its existing identity provider, giving members single sign-on when they open the My Health Record App.



The member signs in through Okta; the React web application is served from AWS CloudFront with static content on S3; the Inovalon Consumer Health Gateway's API server reads from the Inovalon data warehouse and returns FHIR resources to the app.

Technology stack

FRONT END

**React and Angular,
Material UI**

Responsive, mobile-first interfaces with a shared component library.

QUALITY

**Jest, React Testing
Library, JSON schema**

Automated unit and component tests; schema-validated data contracts.

PLATFORM

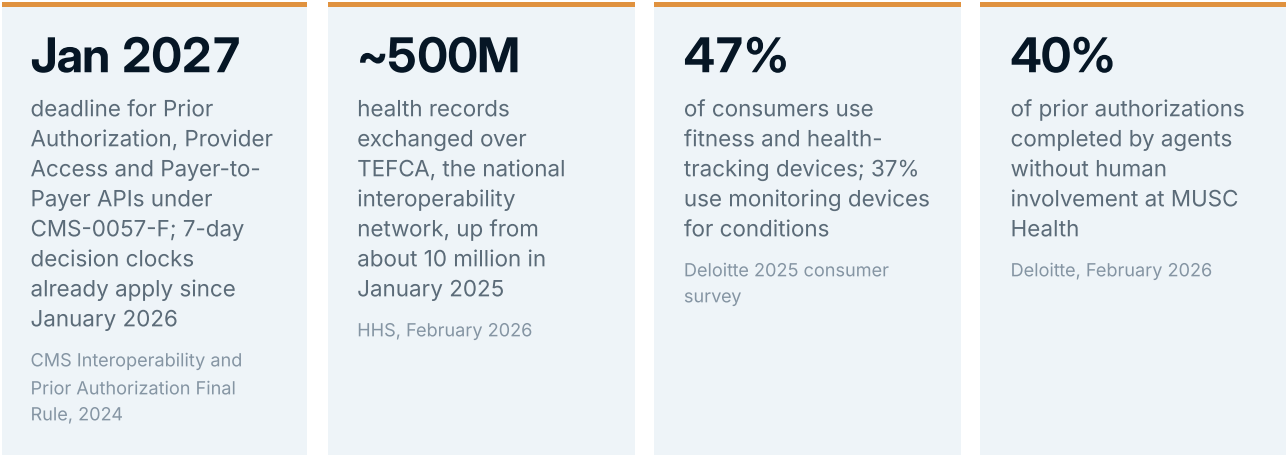
AWS, Okta, FHIR APIs

CloudFront and S3 delivery, OAuth 2.0 identity federation, FHIR resources end to end.

2026 ADDENDUM · PART ONE

What has changed since this work: the rules got stricter, the data got bigger, and AI arrived

When this app was built, giving members their data was a new obligation. In 2026 it is the floor. The next rule is already in force, the national exchange is carrying hundreds of millions of records, and the question for a payer is no longer whether members can see their data but what the plan, and the member's AI assistant, can do with it.



The rules got stricter. CMS-0057-F, the Interoperability and Prior Authorization final rule, builds directly on the APIs this app consumes. From January 2026 impacted payers must decide standard prior-authorization requests within seven days and expedited ones within 72 hours, and give a specific reason for denials; by January 2027 they must offer a Prior Authorization API, a Provider Access API and a Payer-to-Payer API. The member-facing record this app delivers is the same record those APIs expose.

The data got bigger. National exchange has made retrieving a member's clinical history from any connected provider routine, and nearly half of consumers now generate their own health data on a wearable. A member record that once held claims and a few clinical resources now holds the longitudinal story.

AI arrived, with returns and with lessons. Half of US healthcare organizations have implemented generative AI (McKinsey, April 2026); Bain and Bessemer report average returns of 3.5 times with payback in about twelve months, led by administrative work. The payer-specific lessons are just as clear: UnitedHealth was sued in 2023 over nH Predict, an algorithm accused of cutting off care for Medicare Advantage patients, and in 2024 CMS told Medicare Advantage insurers that an algorithm alone may not deny coverage; a clinician must decide. A 2019 study in *Science* found a care-management algorithm applied to some 200 million Americans favored healthier white patients over sicker Black patients because it predicted cost rather than need.

Trust is the product. 81% of healthcare executives told Accenture they must prioritize a trust strategy alongside their technology strategy, and patients who trust their providers are six times more likely to stay. For a plan, the member app is where that trust is won or lost.

2026 ADDENDUM · PART TWO

If we built it today: AI on top of the member record

The architecture still stands; a FHIR-native member record behind OAuth 2.0 is exactly the foundation AI needs. What changes is what each capability can do for the member and for the plan, and the guardrail that comes with it.

CAPABILITY WE BUILT	THEN (2022)	NOW, WITH AI
Coverage and plan information	Benefits, membership card and contacts displayed	Benefits in plain language: a grounded assistant answers "Is this covered, and what will it cost me?" from the member's own plan and claims history, cites the policy clause, and hands off to a person without the member repeating themselves.
Claims and explanation of benefits	Service breakdown and adjudication shown line by line	The EOB explains itself: every adjudicated claim summarized at the member's reading level and in their language, with the reason for any denial and the next step, drafted by a model and reviewed before it ships.
Clinical records	Conditions, medications, allergies and labs listed	A record that can be asked: plain-language lab explanations and a longitudinal summary generated from the FHIR resources, every sentence linked to its source and nothing stated that is not in the record.
Provider and pharmacy search	Directory search by location and specialty	Guided navigation: an agent proposes in-network options that match the member's condition, location, language and formulary, and can draft the appointment request for the member to confirm.
Wearables and risk	Fitbit vitals correlated with conditions by rules	Models watch, care managers decide: monitoring data summarized and triaged so a care manager sees the members whose risk is rising today, with outreach drafted and approved by a person. Decision support, never the decision.
Prior authorization	Outside the app; handled by the plan's operations	Status and speed: the member sees the authorization clock the rule now imposes; on the plan's side, agents assemble and check packets so clinicians review decisions, and only clinicians deny them.
Identity and security	Okta, OAuth 2.0, federated sign-on	The same gate, extended to models: every AI call runs inside the plan's cloud and business associate agreements under the member's authenticated session; prompts and outputs are logged as PHI.

The one thing that does not change. AI reads, explains, drafts and proposes; a clinician, a care manager or the member decides. Because the app is built on FHIR resources behind a single identity gate, every AI output can be traced to its source record and every action to an authenticated user. That is what responsible AI means in practice for a health plan.

2026 ADDENDUM · PART THREE

Guardrails, the future state, and how to start

What can go wrong

- **Confident wrong answers to members.** Air Canada was ordered in 2024 to honor a bereavement discount its chatbot invented; in May 2026 a German appeals court held a medical practice's managing directors responsible for credentials its website chatbot made up. A benefits answer is a promise.
- **Algorithms that decide coverage.** The nH Predict litigation and the 2024 CMS memo draw the line: models may inform a coverage decision; a clinician makes it.
- **Bias in the proxy.** An algorithm that optimizes cost instead of need will under-serve the sickest members. Every model is tested by segment before and after launch.
- **PHI in the wrong place.** Models, prompts and logs are PHI surfaces; no member data in consumer AI tools, ever.

Guardrails Agnos puts in place

- Build inside the plan's cloud and BAA (AWS Bedrock or Azure OpenAI); no PHI leaves the tenant.
- Retrieval-grounded generation only: the assistant answers from the member's record and the plan's policy, and cites both.
- Human in the loop on every coverage, clinical or financial action; the member can always reach a person.
- Shadow mode first, measured against a hand-built baseline for accuracy, omissions and escalations, by member segment.
- A named model owner, a drift alarm and a kill switch, written into the runbook before launch.

Future state, 2027 to 2030

- **The member app becomes the front door.**
Benefits, claims, records, authorizations and care navigation in one grounded conversation, by text or voice, with the plan's clinicians and care managers a tap away.
- **Payer-to-payer and provider access by default.**
Under CMS-0057-F a member's history follows them between plans and reaches their providers through the same FHIR APIs this app already consumes; the member sees exactly who has seen what.
- **Prevention funded by the data.**
Wearable and claims data feed models that find rising risk early and agents that draft outreach; care managers supervise exceptions, and the plan pays for prevention instead of admissions.
- **Loyalty attaches to the trusted assistant.**
Members stay with the plan whose AI they trust, the way they once stayed with the doctor they trusted.

How to start. Pick the single highest-volume member question, usually "Is this covered?" or "Why was this denied?". Measure today's call volume, handle time and first-contact resolution. Run a grounded assistant on the same questions inside the plan's cloud BAA in shadow mode, with member-services staff scoring every answer. Ship only when it beats the baseline on accuracy, not just speed. Agnos has run this sequence; it takes weeks, not quarters.

WHY AGNOS

FHIR depth, product discipline, and now an AI-first delivery model

Interoperability expertise. Extensive experience with FHIR and HL7 v2, integration with Epic, Cerner and CMS Blue Button 2.0; FHIR implemented with GraphQL, HAPI, and on Azure, Google Cloud and AWS. We started implementing FHIR for clients before it was commonly used, we have built FHIR-based accelerators, and our internal data models are FHIR-based. Our interoperability implementations at CareCloud have been referenced by Google Cloud's Healthcare API teams, and our products are honored by the CARIN Alliance for meeting CMS interoperability guidelines.

Payer and provider experience. Patient-facing and provider-facing applications, applications for SaaS vendors, enterprise solutions for medical practices, and the payer version of a patient app built with a partner.

Independent and transparent. We give back to customers any compensation we receive from strategic alliance partners, and under our Gain Share model we do not make money unless you realize the outcomes we define together. We maintain HIPAA compliance.

AI-first since 2026. Agnos now delivers software through an AI-driven SDLC: specifications become pull requests through coding agents, CI is the gate, and senior engineers review and merge. The same approach is available for your AI initiatives, built inside your cloud and your BAA.

ABOUT THIS PAPER

The AI Sherpa, about Agnos, and the sources behind the 2026 addendum



THE AI SHERPA

AI for Good and AI for Evil are the same technology. The doctor who treats himself has a fool for a patient, and the health system that takes on AI alone is in the same position. The AI Sherpa is the Agnos promise: a guide who knows the mountain, builds inside your cloud and your business associate agreements, measures every step against a baseline, and climbs with you.

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About Agnos. Agnos was established in 2012 with a mission to empower businesses with next-generation, end-to-end agile software development services. We combine human creativity with cutting-edge technologies to benefit society and shape accountable business. Our hand-picked global team of technologists and consultants, with partner capacity of more than 20,000 worldwide, offers a follow-the-sun delivery platform. Core values: agility, trust and quality. As an AI-first services company focused on the intersection of healthcare and artificial intelligence, Agnos guides healthcare organizations through responsible, secure AI, from strategy to production.

Sources for the 2026 addendum. CMS, Interoperability and Patient Access Final Rule (CMS-9115-F), 2020, and Interoperability and Prior Authorization Final Rule (CMS-0057-F), January 2024. HHS, "TEFCA reaches nearly 500 million health records exchanged," February 11, 2026. Deloitte, 2025 Health Care Consumer Survey; Deloitte Center for Health Solutions, "Many health care leaders are leaning into agentic AI as adoption hurdles ease," February 11, 2026. McKinsey, "Generative AI in healthcare: current trends and future outlook," April 16, 2026. Bain & Company with Bessemer Venture Partners, "The 2026 Healthcare AI ROI Scorecard," October 14, 2026. Accenture, health system C-suite survey, March 2025. Healthcare Dive on the UnitedHealth nH Predict lawsuit, November 2023. CMS memo to Medicare Advantage organizations on the use of algorithms in coverage decisions, February 2024. Obermeyer et al., "Dissecting racial bias in an algorithm used to manage the health of populations," *Science*, 2019. British Columbia Civil Resolution Tribunal, *Moffatt v. Air Canada*, February 2024. Higher Regional Court of Hamm, chatbot liability decision, May 2026, via DLA Piper. Inovalon ONE® and Consumer Health Gateway™ are trademarks of Inovalon, Inc.

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