

The AI Arms Race in Healthcare Billing: Why Providers Can't Afford to Fall Behind

Overview

A silent arms race is underway in healthcare billing. On one side are payers, rapidly deploying artificial intelligence and autonomous agents to streamline adjudication, identify documentation gaps, and accelerate denials. On the other side are providers—many still relying on manual RCM workflows, underpowered billing systems, and overburdened staff. The imbalance is growing, and multisite healthcare providers stand to lose the most.

The Payers Are Already Using AI

UnitedHealth Group, Optum, and other major insurers have already embedded AI at scale in their claims management infrastructure. Optum, for example, uses predictive analytics and intelligent automation to flag discrepancies in claims before they even reach human adjusters. Reports show that AI tools are now being used to automatically deny claims deemed "not medically necessary" or lacking proper documentation—sometimes without full human review (See detailed table below).

The result? Faster denials, more complex appeals, and growing delays in reimbursement.

Payer History of AI Adoption for Denials

Insurer	AI system / vendor	AI Use in Denials	Date	Key source(s)
Cigna	“PDX” internal algorithm	Batch-reviews incoming claims and automatically issues medical-necessity denials in < 2 seconds;	Mar 2023 – ProPublica exposé; congressional probes continued through 2024–25	ProPublica
UnitedHealthcare (UnitedHealth Group)	nH Predict (developed by subsidiary naviHealth)	Predicts post-acute-care length-of-stay and flags days beyond the prediction for denial in Medicare Advantage	Nov 2023 original lawsuit;	(Becker's Payer Issues Payer News, legalhie.com, Financial Times)

Insurer	AI system / vendor	AI Use in Denials	Date	Key source(s)
CVS Health / Aetna	Proprietary predictive-authorization engine (not publicly branded)	Senate Finance Subcommittee found Aetna used algorithmic tools to deny post-acute-care prior-authorization requests at 3× its overall denial rate.	Oct 2024 Senate report on Medicare Advantage denials	Healthcare Dive, American Hospital Association
Humana	Unnamed predictive rules engine	Denied post-acute-care requests at 16× its overall rate	Oct 2024 Senate report; Apr 2025 lawsuit filing	American Hospital Association, Health Care Litigation Tracker (ProPublica)
Multi-payer example (UnitedHealth, Humana, Cigna)	AI-supported eviCore “Dial” platform (outsourced PA vendor)	eviCore lets insurers tune an algorithmic “dial” to increase the probability that a doctor will deny a prior-auth request.	Nov 2024 ProPublica investigation	(ProPublica)

What This Means for Healthcare Providers

As payers get faster and smarter, providers are being buried under:

- **Increasing denial volume**
- **Shrinking appeal windows**
- **Longer A/R cycles**
- **Higher administrative costs**

Multisite dental groups, behavioral health organizations, infusion providers, and DME suppliers are especially vulnerable. Their scale amplifies inefficiencies, and manual billing teams can't keep pace with AI-powered payers.

The Only Response: Match AI with AI

To survive—and thrive—in this new environment, providers must adopt their own AI agents to:

- **Preempt denials through proactive claim validation**
- **Monitor authorization and documentation in real time**
- **Respond instantly to payer rule changes**
- **Automate appeals, follow-ups, and patient billing workflows**

AI agents don't just catch up to the payers—they create a level playing field.

The Cost of Doing Nothing

Failing to respond to this shift means falling further behind each month. Without automation, providers will:

- **Experience delayed or denied revenue they cannot recover**
- **Burn out billing teams with unscalable workloads**
- **Lose margin and cash flow visibility at the executive level**

Conclusion

The AI arms race in healthcare billing is real. Payers are moving fast. Providers who don't match their pace will suffer rising denials, falling collections, and operational burnout. The solution is clear: equip your team with AI agents built to navigate payer complexity—and win.

Want to see how agentic AI can power your RCM strategy?
[Book a demo or workflow assessment today.](#)