

ARTIFICIAL HEALTHCARE INTELLIGENCE

How One Document Can Fix American Healthcare

Part 2: The Technology, the Evidence, and the Only Viable Path

A White Paper by Artificial Healthcare Intelligence (AHI)

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Part 1 traced the cascade from the encounter note to \$5.3 trillion in broken healthcare. Part 2 demonstrates why traditional reforms cannot fix it, why current technology makes it worse, and how AHI's MDMai and ENCOUNTERai represent the only viable path to reversing the cascade, without requiring Congressional approval, regulatory reform, or EHR vendor cooperation.

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EXECUTIVE SUMMARY

Part 1 of this white paper traced an eleven-link causal cascade from the clinical encounter note to \$5.3 trillion in healthcare spending with last-place outcomes among wealthy nations. That analysis identified the encounter note as the root cause, the single document through which all physician reimbursement flows, creating documentation burden that cascades through burnout, defensive medicine, declining reimbursement, access disparities, practice collapse, corporate consolidation, taxpayer-funded workarounds, emergency department misuse, industrialized claim denial, and socioeconomic patient sorting.

Part 2 answers the question that Part 1 inevitably provokes: *Why don't we just fix it?*

The answer is that the U.S. healthcare system operates inside a political-economic structure specifically designed (through \$744 million in annual lobbying, regulatory capture, corporate profit extraction, political cycling, and intentional complexity) to prevent exactly the reforms that would address the cascade. Every dollar of the \$5.3 trillion is someone's revenue. Every reform threatens someone's business model. Every legislative fix triggers a lobbying counter-offensive that has defeated every major healthcare reform attempt in 80 years.

This white paper demonstrates three things:

First, traditional reform is structurally blocked. The healthcare lobby has spent over \$10 billion in two decades preventing change. Regulatory capture ensures the agencies tasked with implementing reform are staffed by the industries they regulate. Political cycling means any reform that survives one administration is dismantled by the next. The ACA's Medicaid fee bump proved that raising reimbursement rates improves access. Then 34 states let it expire. The pattern has repeated for 80 years.

Second, current technology makes the problem worse, not better. The \$35 billion HITECH investment built proprietary EHR silos that fragment patient data across hundreds of incompatible systems. AI ambient scribes (the fastest-adopted technology in healthcare history) hallucinate clinical content at rates up to 31% per note, increased note length by 20.6%, save only 34–41 seconds per note in randomized trials, and are "coding naive" with no demonstrated financial improvement. These tools automate a 30-year-old dictation workflow without addressing the billing architecture that created the documentation crisis.

Third, technology that operates directly at the encounter note, bypassing every structural barrier, is the only viable path. AHI's MDMAi and ENCOUNTERai don't require Congressional approval. They can't be filibustered. They don't depend on EHR vendor cooperation. They operate inside the existing billing architecture, within the existing regulatory framework, using existing EHR outputs. But they fix the document that generates every downstream failure. When documentation burden drops from 1,400 hours to 100 hours per year, when undercoding is eliminated, when physicians reclaim their time and their revenue, the cascade begins reversing.

The healthcare industry spent \$743.9 million in 2024 lobbying to prevent legislative reform. They cannot lobby to prevent a physician from using a free AI tool that saves them 1,300 hours per year and recovers 5–11% of their revenue. They cannot lobby to prevent the encounter note from being written correctly. The only path around a \$744 million lobbying wall is through the encounter note itself. That is exactly what we built.

CHAPTER 1: WHY HEALTHCARE IS ALMOST IMPOSSIBLE TO FIX

The question every reader asks after seeing the evidence in Part 1 is: "Why don't we just fix it?" Why not raise Medicaid reimbursement? Why not fix EHRs? Why not stop the claim denials? The answer, after years of tracing every link in this chain, is that U.S. healthcare operates inside a political-economic system specifically designed, through lobbying, regulatory capture, corporate consolidation, political cycling, and institutional lock-in, to prevent exactly these fixes. The entities profiting from the \$5.3 trillion system have spent decades constructing barriers to reform that are nearly impervious to legislative action.

The \$744 Million Lobbying Wall

The healthcare industry is the single largest lobbying sector in the United States, and it has held that position for over two decades. **The health sector spent \$743.9 million on federal lobbying in 2024** — the only sector exceeding \$700 million. The pharmaceuticals and health products industry alone spent \$384.5 million, more than any single industry in any sector. The insurance industry added \$155 million. Over the past 20 years, the health sector has spent approximately **\$10–12 billion on federal lobbying alone** — not including state-level lobbying, campaign contributions, or dark money spending.

The spending is bipartisan by design. PhRMA, AHA, Blue Cross Blue Shield, and AMA all ranked in the top 10 overall lobbying spenders in 2024 and contribute to candidates on both sides of the aisle. **UnitedHealth Group alone spent \$9.93 million through the first three quarters of 2025** — already exceeding its \$7.52 million for all of 2024, deploying 50 lobbyists including former staffers for House Democratic Leader Hakeem Jeffries, former aides to Senate Majority Leader John Thune, former special assistants to Presidents Trump and Bush, and a top Democratic fundraiser who simultaneously raised hundreds of thousands for the DCCC while lobbying Congress on behalf of UnitedHealth.

The result: Congress dropped PBM reform, site-neutral payment reform, and Medicare physician payment fixes from the December 2024 spending bill after what Axios described as a lobbying "onslaught." The No Upcode Act, targeting Medicare Advantage overbilling, was stripped from the 2025 reconciliation bill after insurance industry lobbying. Physicians received their fourth consecutive year of Medicare payment cuts.

Sources: OpenSecrets (2025); Axios (2025); American Prospect (2025); Star Tribune (2025); Washington Post (2025)

The Corporate Profit Motive: \$5.3 Trillion Is Someone's Revenue

The fundamental economic reality is that **every dollar of waste in U.S. healthcare is someone's income**. The \$812 billion in administrative costs, the \$55.6–200+ billion in medical liability system costs and defensive medicine, the \$32 billion in avoidable ER visits, the \$47 billion in FQHC and supplemental payment workarounds. All represent revenue streams for corporations with powerful incentives and resources to preserve them.

The seven largest health insurers' combined revenue tripled in a decade, from \$511 billion in 2014 to \$1.517 trillion in 2024, collecting \$10.4 trillion in cumulative revenue over that period. UnitedHealth Group's revenue reached \$400 billion in 2024, roughly six times its level 15 years ago. During the same decade, physician Medicare payment fell 33% in real terms. S&P 500 healthcare companies paid **\$2.6 trillion in shareholder payouts from 2001 to 2022**, reaching \$170 billion annually by 2022 in dividends and stock buybacks during a period of rising physician burnout, declining access, and worsening outcomes.

The Partnership for America's Health Care Future (PAHCF), an alliance of hospital, insurance, and pharmaceutical lobbyists, explicitly formed in 2018 to prevent single-payer healthcare, Medicare expansion, or a public option. Leaked planning documents outlined the objective: "change the national conversation around single payer/Medicare for All" and "minimize the potential for this option from becoming part of a national political party's platform in 2020." Members spent a combined \$143 million on lobbying in 2018 alone.

Sources: EPIC for America (2024); Roy et al., JAMA Internal Medicine (2025); The Intercept; Jacobin (2024)

Regulatory Capture: The Regulators Work for the Regulated

A Health Affairs study (2023) documented the revolving door at HHS: of people appointed between 2004 and 2020, **15% came directly from private industry and 32% exited to industry after their tenure**. The greatest net exits were from the CDC and CMS, the two agencies most central to healthcare regulation. More than half of appointees at CMS, CDC, and the Office of the Deputy Secretary went to private industry after government employment. CMS Administrator Seema Verma went to Oracle. CMS Administrator Marilyn Tavenner came from 25 years at for-profit hospital giant HCA. The pattern is bipartisan and persistent.

The AMA's Relative Value Scale Update Committee (RUC), which effectively sets Medicare physician payment rates, has been criticized as perhaps the most consequential example of regulatory capture in healthcare. CMS accepts RUC

recommendations approximately 90% of the time, and the committee has systematically favored procedure-heavy specialties over primary care, contributing to the primary care crisis that drives the cascade.

Sources: Health Affairs (2023); Healthcare Dive (2023); Milbank Memorial Fund (2022)

Political Cycling: Healthcare Reform's Four-Year Half-Life

The history of healthcare reform is a graveyard of ambitious proposals killed by the same forces: Truman's universal health insurance (1948, killed by AMA), Clinton's Health Security Act (1993, killed by \$1.1 billion in lobbying), the ACA's public option (2009, killed after a UnitedHealthcare lobbyist hosted a \$2,400/person fundraiser with Speaker Pelosi mere hours after she backed off the provision), and Medicare for All (2019–2020, killed by PAHCF despite majority public support and 122 Congressional co-sponsors).

The most instructive case is the ACA's Medicaid primary care fee bump. In 2013–2014, the ACA temporarily raised Medicaid primary care rates to Medicare parity. The evidence was unambiguous: appointment availability increased by 7.7 percentage points, and each \$10 increase in fees produced a 1.7 percentage point increase in appointment probability. **Then 34 states let the increase expire in January 2015**, triggering an average 42.8% reduction in primary care fees. The government proved the fix worked. Then abandoned it.

Sources: PMC/Obama JAMA article (2016); KFF (2025); Urban Institute; Polsky et al., NEJM (2015)

The Complexity Barrier

Perhaps the most insidious barrier is epistemological: the healthcare system is so complex that most people — including most policymakers, cannot identify the root cause. Current political debates focus on drug pricing (approximately 10% of total spending), PBM reform (CBO estimates savings of less than 0.1% of premiums), and hospital consolidation (real but downstream of practice economics). None addresses the encounter note.

The CPT coding system contains approximately 11,000 codes with 420 annual updates. The billing and documentation requirements are so complex that administrative errors (including incorrect coding, missing information, and eligibility issues) account for over 80% of preventable claim denials across specialties. This complexity is not an unfortunate byproduct. It is the mechanism through which administrative costs flow disproportionately to providers while payers automate denials at 1.2 seconds per claim.

When someone says "just raise Medicaid reimbursement," they are proposing a policy that must survive the Senate filibuster (60 votes), overcome hospital, FQHC, and insurer lobbying, sustain funding across multiple administrations,

and survive CMS implementation by revolving-door officials. When someone says "just fix the EHRs," they are proposing replacing \$35 billion in HITECH-subsidized infrastructure against vendor lobbying. When someone says "just stop the claim denials," they are proposing reducing insurer revenue by billions against an industry that has successfully blocked prior authorization reform for decades. Each "simple fix" triggers opposition from multiple powerful industries simultaneously. Sources: Health Affairs; CAQH Administrative Cost Report; CBO scoring data

CHAPTER 2: WHY EHRs CAN'T BE FIXED AND AI WON'T SAVE THEM

The \$35 Billion Subsidy That Built Proprietary Silos

The HITECH Act of 2009 allocated approximately **\$35–38 billion** in incentive payments to drive EHR adoption. Physician adoption jumped from 42% to 88%, and hospital adoption climbed from 9% to 96%. But the program's fatal design flaw was mandating *that* providers digitize records without specifying *how* systems should be built. No unified architecture. No enforceable data standards. No interoperability requirements. Billions in public funds subsidized the entrenchment of proprietary, incompatible systems.

An HHS OIG audit estimated CMS inappropriately paid **\$729.4 million** — 12% of total payments — to professionals who did not meet Meaningful Use requirements. Academic research concluded the \$28.1 billion in subsidies may have only accelerated EHR adoption by approximately seven percentage points above what market forces would have achieved naturally.

Interoperability Remains a Promise, Not a Reality

Despite sixteen years of regulatory effort, only **22% of independent hospitals exchange data routinely**. Only 44% of clinicians agree their EHR provides adequate integration with outside organizations, the lowest-rated metric among all EHR experience measures. Patient data fragmentation is severe: only 4.5% of Medicare beneficiaries have records in a single vendor system, while 19.8% have records across eight or more vendors. Patient matching accuracy drops to roughly 50% across organizations. TEFCA took seven years from authorization to launch and remains voluntary. Zero public enforcement actions for information blocking have been completed despite 1,300+ complaints.

Epic's Inescapable Gravity

Epic controls **42.3% of acute care hospitals** and generated \$5.7 billion in revenue in 2024. Implementations routinely exceed \$1 billion (Mass General

Brigham: \$1.6 billion; Northwell Health: \$1.2 billion; Mayo Clinic: \$1.5 billion). The Texas Attorney General's 2025 antitrust lawsuit states: "Once a hospital is in an Epic database, it is almost impossible to get out." Physician satisfaction scores average 45.9/100 (an F-grade) yet near-100% customer retention persists because leaving is prohibitively expensive.

The VA's Oracle/Cerner implementation is the definitive cautionary tale. The original \$10 billion contract has ballooned to **\$37–50 billion over 28 years**, with only 6 of 170 VA medical centers live after seven years and \$5 billion spent.

The Note Is the Real Problem — Not the EHR

U.S. clinical notes are 3–4 times longer than notes in other English-speaking countries using the exact same EHR software. U.S. clinicians spend 90.2 minutes per day actively using the EHR versus 59.1 minutes for non-U.S. clinicians (53% more time) using the same systems. This proves definitively that the dysfunction is not a technology problem. It is a documentation-for-reimbursement problem rooted in the U.S. payment architecture.

Only 18% of text in clinical notes is manually entered by physicians. 46% is copied from prior notes and 36% is imported from other sources. Note redundancy reached 58.8% by 2018. The American physician has become a data-entry clerk. And AI ambient scribes automate the data entry without challenging the architecture that demands it.

Sources: HITECH Act data; ONC (2023); KLAS Research; Epic Research (2023); VA OIG reports; Sinsky et al.; Rule et al., JAMA Network Open (2021)

CHAPTER 3: THE CASE AGAINST AI AMBIENT SCRIBES

AI ambient scribes, the fastest-adopted technology in healthcare history, rest on a fundamentally flawed premise: that converting spoken words to written notes solves the documentation crisis. The evidence from 60+ peer-reviewed studies reveals otherwise.

Hallucinations, Omissions, and Fabrications

31% of AI-generated ambient notes contained at least one detected hallucination versus 20% of physician-written notes (Palm et al., *Frontiers in Artificial Intelligence*, 2025). The largest manual evaluation to date (Asgari et al., *npj Digital Medicine*, 2025) found a hallucination rate of 1.47% at the sentence level, with 44% classified as "major" — meaning they could impact patient diagnosis or management. The most dangerous hallucinations appeared in the Plan section (21%), the section containing direct instructions for patient care.

An OHSU study using ChatGPT-4 found an average of **23.6 errors per clinical case**. Only 52.9% of data elements were correctly reported across replicates of the same encounter, demonstrating that AI scribe output is fundamentally unreproducible. OpenAI's Whisper model, used by approximately 30,000 clinicians, was found to fabricate sentences in approximately 1.4% of transcriptions, including violent and racially charged fabrications triggered by speech pauses.

The Editing Burden: Trading Typing for Proofreading

A UCI Health study of 23,760 AI-drafted notes found that 84.4% were edited by clinicians before signing. The first randomized clinical trial of AI scribes (Lukac et al., *NEJM AI*, 2025) found users saved an average of **just 41 seconds per note** (9.5% reduction), while DAX Copilot savings did not reach statistical significance. Kaiser Permanente's 63-week deployment, the largest real-world evaluation at 7,260 physicians and 2.5 million encounters, reported that among non-users, barriers included "the perception that editing AI-generated notes took more time than typing from scratch."

Penn Medicine's Net Promoter Score for AI scribes was exactly **zero** — with 35.1% promoters and 35.1% detractors in perfect balance.

A 30-Year-Old Workflow in New Packaging

The concept of converting spoken words to written clinical documentation dates to the early 1900s. Whether the intermediary was a stenographer (1900s), a transcriptionist (1960s–1990s), Dragon NaturallySpeaking (1997), or a GPT-4 ambient listener (2023), the workflow is unchanged: the provider speaks, a machine converts speech to text, the provider reviews the output. Microsoft acquired Nuance for \$19.7 billion in 2022, and DAX Copilot is explicitly marketed as "the latest addition to the Dragon family."

The core limitation is irreducible: ambient scribes can only document what is spoken aloud. Dr. Dina Capalongo of Penn Internal Medicine: "Now, when I'm doing a physical exam, I have to say what I'm doing and what I'm finding out loud." The Assessment & Plan section, the most clinically important part, is systematically under-documented because clinical reasoning is cognitive work that rarely gets spoken during conversation.

Coding Naive and Billing Blind

The AAPC concluded that most AI scribes are **"coding naive — unaware of all the requirements of documentation from a revenue cycle perspective."** The Peterson Health Technology Institute's March 2025 independent assessment found that health systems **"haven't seen significant financial improvements"** from scribe technologies. Meanwhile, Duggan et al. found AI scribes at Penn Medicine **increased note length by 20.6% compared to traditional documentation, exacerbating the bloat crisis they were supposed to solve.**

AI ambient scribes represent a sophisticated incremental improvement to a 30-year-old dictation workflow. It still requires the provider to verbalize everything, still generates errors requiring physician review, still produces verbose notes that exacerbate bloat, still fails in noisy or complex clinical environments, still ignores billing optimization, and still lacks FDA oversight while placing full legal liability on the signing physician. Sources: Palm et al. (2025); Asgari et al. (2025); Lukac et al., NEJM AI (2025); Kaiser Permanente NEJM Catalyst (2025); AAPC (2024); PHTI (2025); Duggan et al., JAMA Network Open (2025)

CHAPTER 4: THE TECHNOLOGY THAT FIXES THE NOTE

If the encounter note is the root cause of healthcare's dysfunction, and if traditional reform is structurally blocked, and if current technology automates the problem rather than solving it, then the solution must be a technology that operates directly on the encounter note, within the existing system, without requiring permission from any of the entities profiting from the status quo.

AHI has built two interlocking platforms designed for exactly this purpose: **MDMai** (Medical Decision Making AI), which optimizes existing encounter notes for billing accuracy and documentation quality; and **ENCOUNTERai**, which generates complete encounter notes predictively from minimal structured input, trained on each provider's own clinical documentation patterns.

MDMai: What It Does and Why Nothing Else Can

MDMai's 12-agent AI architecture simultaneously performs six functions that no other system in healthcare combines:

- **Ingests encounter notes from any EHR** — EHR-agnostic, no API access, IT cooperation, or vendor approval required
- **Analyzes MDM complexity across all three CMS elements** — problems addressed, data reviewed, risk of complications — mapping every section to billing-level criteria
- **Determines optimal billing level** — not just what was billed, but what the documentation actually supports, performing the analysis of a certified coder and compliance auditor in real time
- **Identifies additional billable elements** — prolonged services, HCPCS codes, critical care time, chronic care management — routinely missed in the billing process
- **Produces structured MDMai reports** paired with each note, creating the annotated training dataset ENCOUNTERai requires
- **Operates across every known billable encounter type** from every known medical facility type: office visits, hospital encounters, ED visits, telehealth, consultations

No EHR performs MDM analysis. No AI ambient scribe analyzes existing notes for billing optimization. No CDI tool handles outpatient E/M MDM analysis. No revenue cycle platform processes notes before coding occurs. The gap is structural, not technical. No other organization has built a system designed to

simultaneously serve as a billing optimization tool, documentation quality analyzer, and AI training data pipeline.

ENCOUNTERai: The Predictive Documentation Engine

ENCOUNTERai represents a fundamentally different approach to clinical documentation. Rather than transcribing what a physician says (ambient scribes) or templating what they click (EHRs), ENCOUNTERai **generates complete encounter notes predictively** from minimal structured input (diagnosis codes, key findings, treatment decisions) in each provider's clinical voice, optimized for billing from the moment of creation.

The critical insight: **82% of clinical note text is never originally composed.** Wang et al. (JAMA Internal Medicine, 2017) found only 18% of progress note text was manually entered; 46% was copied and 36% imported from structured data. Rule et al. (JAMA Network Open, 2021) found 58.8% note redundancy across 2.7 million outpatient notes. Rotenstein et al. (JGIM, 2023) found 89,718 physicians followed predominant template patterns on 63.6% of clinic days. This predictability is precisely the condition under which a provider-specific AI model excels.

The provider reviews and signs, approaching **approximately one minute per encounter** rather than the 16–36 minutes currently consumed. The physician's review time is spent on clinical accuracy verification, not billing compliance drudgery.

The 1,500-Note Training Pipeline

The MDMAi-to-ENCOUNTERai pipeline operates in four stages:

Stage 1: Provider uses MDMAi. Encounter notes are processed, providing immediate billing optimization and documentation feedback. The provider benefits from Day 1 through recovered revenue from undercoding and reduced denial risk.

Stage 2: MDMAi generates annotated training data. Each processed note produces a paired dataset: raw note + MDMAi analysis (billing codes, MDM level, optimization recommendations, gap identification), stored in AHI's Healthcare Analytics Intelligence (HAL) platform.

Stage 3: At 1,500+ notes, ENCOUNTERai training initiates. The accumulated dataset reaches the threshold for reliable fine-tuning. The model learns the provider's documentation patterns, clinical reasoning, terminology, examination conventions, and the critical billing-documentation relationship.

Stage 4: ENCOUNTERai generates predictive documentation from minimal input, optimized for billing from inception. The provider reviews and signs.

The 1,500-note minimum is consistent with machine learning literature (arXiv 2025: minimum 1,000 samples; Mayo Clinic Proceedings 2024: 1,500–15,000+ for clinical fine-tuning) while accounting for the complexity unique to clinical documentation: provider style, specialty variation, visit-type coverage, billing-code distribution, and overfitting prevention in patient safety contexts. At 20–25 patients per day, providers reach 1,500 notes in approximately **60–75 working days**.

This pipeline is why MDMAi is offered free to physician practices. It is not philanthropy. It is the data acquisition mechanism that makes ENCOUNTERai possible. The value proposition is aligned: the provider benefits immediately, and the accumulated data creates an asset no competitor can replicate.

The Competitive Moat: Why This Pipeline Is Unreplicable

EHR vendors won't build it — their business model is platform lock-in. A vendor-neutral analysis tool threatens their position. **AI scribe companies can't build it** — they generate notes from voice but don't analyze existing notes or perform MDM analysis. **Revenue cycle companies operate post-hoc** — they process claims after submission, not clinical notes at creation. **Academic institutions can't scale it** — they lack an EHR-agnostic processing engine deployable to any practice. The 1,500-note threshold creates a time-based moat: even a competitor who built a comparable engine tomorrow would need 60–75 days of data per provider before their system could function.

The U.S. generates approximately **3–4 billion clinical encounter notes annually**. AHI's MDMAi platform is the only EHR-agnostic mechanism that can aggregate these notes with billing annotation at scale. The resulting database (encounter notes paired with MDM analysis, billing codes, and optimization data) is the most complete clinical documentation dataset in existence, and it grows with every provider who uses the free MDMAi tool.

Sources: arXiv (2025); Databricks; Mayo Clinic Proceedings (2024); JMIR (2025); Wang et al. (2017); Rule et al. (2021); Rotenstein et al. (2023); AAPC (2024)

CHAPTER 5: THE 1,400-HOUR DIVIDEND

From 1,400 Hours to 100 Hours

An AMA analysis of 200,081 physicians across all specialties found physicians spend **5.8 hours on the EHR for every 8 hours** of scheduled patient time. Primary care physicians spend 7.3 hours. Infectious disease physicians spend 8.4 hours, exceeding their scheduled patient time. Extrapolated across 240 clinical days, this translates to approximately **1,400–1,750 hours annually** consumed by EHR documentation. Family physicians additionally log 86 minutes of after-hours "pajama time" each night, approximately 340 hours per year stolen from evenings and families.

Metric	Current State	With ENCOUNTERai
Note creation per (review/sign)	16–36 minutes	~1 minute encounter**
Daily documentation	4–6 hours	~25–30 minutes (25 pts)
Annual documentation	1,100–1,600 hours	~100–120 hours time
Time returned hours	—	**~1,000–1,500 annually**
After-hours pajama	86 min/day (340 hrs/yr)	Near zero time** -----

The time dividend of 1,000–1,500 hours creates physician-directed optionality. At 18 minutes per encounter, recaptured time enables approximately 4,600 additional patient visits per year. Even a modest reallocation of 5 additional patients per day translates to **\$153,600 in additional annual revenue per physician** at average Medicare reimbursement, without any change in fee schedule. Across one million physicians, even 500 additional visits per physician equals 500 million additional patient encounters nationally, a substantial offset to the AAMC's projected shortage of up to 86,000 physicians by 2036 — with a separate HRSA analysis projecting shortfalls exceeding 187,000 by 2037.

What does that tell you? Seventy-seven percent of physicians would trade money for time, confirming the documentation burden is the binding constraint, not the compensation level.

The Medicaid Access Unlock

The economic barrier to seeing Medicaid patients is not low reimbursement alone. It is **low reimbursement multiplied by high documentation time**. A Medicaid 99213 visit pays \$55–66 nationally (as low as \$34 in Florida). When that visit requires 20–30 minutes of documentation time, the implicit hourly rate for documentation time alone is \$110–198. With ENCOUNTERai, the same \$55–66 requires one minute of review. The economic friction that drives 26% of physicians to refuse new Medicaid patients largely disappears.

The downstream cascade: more physicians accept Medicaid patients → FQHC demand decreases (reducing the \$32 billion parallel system cost) → avoidable ER visits decrease (\$32+ billion annually) → wait times decrease (currently 31 days average, up 48% since 2004) → patient outcomes improve through earlier access to primary care.

The Documentation Quality Paradox: Less Time, Better Notes

Olson et al. (JAMA Network Open, 2025) demonstrated that when AI documentation tools partially fix the burden, burnout drops from 51.9% to 38.8% in 30 days, after-hours time drops 0.90 hours per day, and note-related cognitive task load falls 2.64 points. **Reduced burden did not reduce note quality.**

ENCOUNTERai separates clinical quality from billing optimization for the first time. Currently, physicians must simultaneously think about what's clinically relevant, what's legally protective, and what supports billing. This triple cognitive load degrades all three. ENCOUNTERai handles the legal and billing dimensions automatically, allowing physicians to focus exclusively on clinical accuracy during their brief review, producing notes that are paradoxically better clinically despite requiring near-zero physician time.

Sources: Sinsky et al., JGIM (2024); Arndt et al. (2017); Doximity (2025); Olson et al. (2025); Neprash et al. (2023); MACPAC; AAMC

CHAPTER 6: PAYER RETALIATION AND THE MDMai DEFENSE

A natural objection arises: if MDMai eliminates undercoding and practices suddenly bill at accurate levels, won't insurers respond with more aggressive denials, audits, and downcoding? The evidence shows this concern is real but strategically manageable. And payers are already retaliating against accurate coding, making MDMai's defense architecture not optional but essential.

The Cigna/Aetna Downcoding Offensive

Effective October 1, 2025, Cigna's Evaluation and Management Coding Accuracy Policy (R49), which was briefly paused days later amid provider backlash before being reinstated, and Aetna's Claim and Code Review Program began **automatically downcoding Level 4 and 5 E/M visits without reviewing the medical record** — based solely on whether the submitted diagnosis code "appears to support" the complexity level. To receive the originally billed payment, providers must file a post-payment appeal with full medical records. E/M code 99214 is the most frequently billed E/M code in Medicare Part B, representing 25% of all allowed claims. ASIPP concluded: "Overcoding of CPT codes 99214 and 99215 is de minimis", meaning these policies target legitimate coding, not fraud.

ASIPP characterized the policies as a "deny first, pay later" system that "presumes physicians are guilty of 'upcoding' until proven innocent." The strategic logic is transparent: insurers expect that busy practices will not have the time or resources to appeal every improperly downcoded claim, resulting in net savings. As ASIPP noted: "Independent practices lack the armies of coders and administrators that hospital systems have. They don't have the capacity to play insurers' bureaucratic games."

40+ Health Systems Have Called the Bluff

More than 40 health systems have dropped Medicare Advantage contracts in 2024–2025 — including Mayo Clinic, NewYork-Presbyterian, UNC Health, HealthPartners, and Baylor Scott & White, proving that providers have more leverage than they realize. HealthPartners alleged UnitedHealthcare denial rates were "up to 10 times higher than other insurers." A KFF report found that MA enrollees had access to just 48% of the physicians available to Traditional Medicare beneficiaries.

CMS has **never imposed sanctions** for network adequacy violations. MedPAC's June 2024 report confirmed: "CMS has the authority to impose intermediate sanctions or civil monetary penalties for noncompliance with network adequacy standards, but it has never done so." But the provider exodus forces payers to renegotiate. Or lose members when health systems grant patients special enrollment periods to switch plans.

Why Documentation Beats Algorithms

The evidence on claims appeal success rates is MDMai's strongest defense:

Metric	Rate	Source
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Internal appeal overturn rate	44%	KFF, 2023 (commercial)
MA claim denial overturn rate	57%	Health Affairs, 2025
Medical necessity denial overturn	\~ 70%	Industry analysis (w/ docs)
MA prior auth denial overturn rate	75%	HHS OIG, 2018
Cigna MA prior auth overturn Committee	80%	House E&C (appealed)
Claims actually appealed (% of -----)	<1%	KFF, 2023 denials) -----

The system's most exploitable vulnerability is that fewer than 1% of denied claims are appealed. The payer strategy depends on this: deny at scale (automated, pennies per denial), count on providers not appealing (overwhelmed, understaffed), profit from the 99%+ that go unchallenged. **MDMai disrupts this equation.** When documentation is airtight from creation and auto-generated appeal letters map specific MDM elements to CMS guidelines, the cost of appealing drops from \$30–40 per appeal to \$3–5. At 5 denials per day, that's \$160–210 recovered daily per provider, making the payer's "deny first" strategy a net cost center for the payer rather than the practice.

Sources: Cigna R49 policy; ASIPP (2025); Becker's (2025); KFF Health News (2025); MedPAC (2024); KFF (2023); HHS OIG (2018)

CHAPTER 7: THE UPWARD CASCADE

Part 1 traced the downward cascade: encounter note → documentation burden → burnout → declining reimbursement → access disparities → practice collapse → corporate consolidation → taxpayer workarounds → ER misuse → industrialized denial → \$5.3 trillion. The key insight people miss is that the cascade is not linear. It is exponential. Each link improves every other link when reversed.

Corporate Consolidation Reversal

Physicians overwhelmingly prefer independence. The Bain & Company 2024 survey found physicians at hospital-led organizations are **nearly 3x more likely to be dissatisfied** than those at physician-owned practices, with Net Promoter Scores 25–40 points lower. 71% of physicians who moved from employed to self-employed reported satisfaction; only 40% who moved the other direction were satisfied. Small independent practices show burnout rates of just **13.5% versus the 54.4% national average**. A fourfold difference.

The AMA found the top reasons physicians sold practices were: need to negotiate better payment rates (70.8%), need to manage regulatory/administrative requirements (64.9%), and need to access costly resources (63.6%). MDMai directly addresses the first (revenue optimization) and ENCOUNTERai eliminates the documentation driver of the second entirely. When independent practice becomes economically viable again, the consolidation pressure reverses.

The Physician Pipeline Recovery

42.9% of current physicians would not choose medicine again. Nearly two-thirds would not recommend healthcare as a profession. Among physicians under 45, self-employment fell from 44.3% in 2012 to 31.7% in 2022. Only 22% of medical residents anticipate owning a practice stake. The AAMC projects a shortage of up to 86,000 physicians by 2036; a separate HRSA analysis projects shortfalls exceeding 187,000 by 2037.

The pipeline collapse is not driven by compensation. It's driven by the working conditions documentation burden creates. When aspiring physicians see over \$200K in medical school debt, declining real pay, lost autonomy, liability risk, and 1,400 hours per year of data entry, the calculation is rational: don't enter medicine. When ENCOUNTERai returns those 1,400 hours, the career proposition fundamentally changes. The same physicians who currently regret their career choice would, in a system where they practiced actual medicine for 6–7 hours per day and went home to their families in the evening, recommend the profession again.

The NP/PA substitution trend (with NP employment projected to grow 40–46% and NPs and PAs now comprising 51% of primary care providers in some analyses) is a downstream consequence of physician supply failure, not a superior model of care delivery. Emerging evidence from Harvard Medical School (*Annals of Internal Medicine*, 2025) links private equity hospital acquisitions to increased emergency department deaths (13.4% increase) and reduced staffing. When the physician supply recovers, the economic logic of physician replacement weakens.

The \$47 Billion Workaround Unwind

The government currently spends approximately \$47 billion annually on workarounds for the access crisis: \$32 billion on the FQHC system (1,359 awardees, 17,000+ sites, 32.4 million patients, 139 million visits) and \$15 billion in state supplemental Medicaid payments. FQHCs receive \$150–300+ per Medicaid visit through the Prospective Payment System; private practices receive \$55–66 for a comparable visit.

When documentation burden disappears and Medicaid patients become economically viable for private practices, the demand for the FQHC parallel system diminishes. The \$47 billion is not eliminated. FQHCs serve 6 million uninsured patients and provide wraparound services, but the economic logic of building an ever-expanding parallel system to compensate for broken reimbursement weakens when the mainstream provider network can sustain Medicaid panels.

Sources: Bain & Company (2024); AMA (2024); Physician Advocacy Institute (2024); AAMC (2024); HRSA (2024); MACPAC (2025); KFF (2025)

THE COMPLETE SOLUTION: FIX THE NOTE, FIX THE SYSTEM

The evidence assembled across both parts of this white paper leads to a single conclusion:

The clinical encounter note is simultaneously the root cause of healthcare's \$5.3 trillion dysfunction and the only intervention point where the entire cascade can be reversed, because it is the only point where technology can operate without requiring legislative approval, regulatory reform, EHR vendor cooperation, or insurer consent.

The logic is straightforward:

*Current Downward Cascade** **Reversed by AHI Technology*

Documentation consumes 1,400 hrs/yr ENCOUNTERai reduces to ~100 hrs/yr
45% undercoding → 5–11% revenue MDMai eliminates undercoding at loss creation

Burnout at 49–63% Olson showed 13-pt drop with partial fix

26% refuse new Medicaid patients Documentation barrier removed

\$47B in FQHC/supplemental Private practices absorb Medicaid
workarounds demand

\$32B+ in avoidable ER visits Primary care access expands

77.6% physicians corporate-employed Independent practice becomes viable

19% claims denied; <1% appealed MDMai auto-generates winning appeals

42.9% wouldn't choose medicine Career proposition transforms again -----

The healthcare industry spent \$743.9 million in 2024 lobbying to prevent legislative reform. They cannot lobby to prevent a physician from using a free AI tool that saves them 1,300 hours per year and recovers 5–11% of their revenue. They cannot lobby to prevent the encounter note from being written correctly. They cannot lobby to prevent burnout from dropping 13 percentage points in 30 days.

The only path around a \$744 million lobbying wall is through the encounter note itself. That is exactly what we built.

We didn't invent this evidence. JAMA published it. The AMA documented it. CMS data confirms it. The GAO reported it. We just connected the dots that nobody else connected. And then we built the technology to fix it.

ABOUT ARTIFICIAL HEALTHCARE INTELLIGENCE

Artificial Healthcare Intelligence (AHI) is a 501(c)(3) nonprofit healthcare technology organization headquartered in the United States. Founded by John Leoniak, a software engineer with over 30 years of experience and more than a decade in healthcare operations, AHI was born from watching the crisis happen firsthand: his wife, Dr. Jennifer Leoniak, a board-certified infectious disease specialist who owns an infectious disease practice serving a population of over 300,000, was spending more time on documentation than with patients and family.

During the COVID-19 pandemic, the practice's daily patient encounters exploded from 10–15 to 100–120 for three consecutive years, generating over 100,000 encounter notes across involving most medical specialties. This experience provided unique insight into both the documentation burden destroying physician quality of life and the extraordinary clinical value locked within encounter notes that no one was capturing.

AHI's product suite includes MDMai (medical documentation and billing optimization), HAL (Healthcare Intelligence), HALi (patient-facing Healthcare Intelligence), CODEai, REFERRALai, and ENCOUNTERai. Dr. Jennifer Leoniak serves as Chief Medical Officer, providing the clinical validation essential for healthcare Intelligence systems that demand zero error tolerance.

Contact

For media inquiries, partnership discussions, or additional information:

Artificial Healthcare Intelligence (AHI)

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