



The Revenue Already Earned: How AI Contract Modeling Recovers Underpayments from Closed Accounts

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For most hospital revenue cycle teams, a zero-balance account means the case is closed. A claim was processed, a payment arrived—or didn't—and the work moved on. What almost no one investigates is if the payment that came in was the correct amount.

That unexamined gap—between what payers remit and what contracts require—is where hundreds of millions in hospital revenue disappear each year without triggering a single follow-up.

The Silent Losses Inside Closed Accounts

Underpayments are structurally different from denials, and that difference is costly. A denied claim generates a task. An underpaid claim typically generates nothing—the shortfall gets absorbed into a zero-balance status, the case closes, and most revenue cycle teams don't have the bandwidth to revisit it.

The aggregate impact is significant. In 2023, hospitals absorbed [\\$130 billion](#) in underpayments from Medicare and Medicaid, with Medicare reimbursing just 83 cents for every dollar spent on patient care. Commercial payers add further exposure: the Healthcare Financial Management Association estimates that underpayment losses within payer contracts can reach as high as [11% of net patient revenue](#). That's earned, documented revenue that was never fully collected—and in most cases never will be without a systematic effort to find it.

Contract complexity keeps those losses invisible. A typical health system manages hundreds of payer agreements, each packed with fee schedules, carve-outs, episodic rates, and payment caps. No team can manually reconcile every remittance against every applicable contract term. Underpayments caused by misapplied fee schedules, missed billing provisions, generic adjustment codes, and sub-minimum payments routinely close as zero-balance accounts without ever triggering a follow-up.

What AI Contract Modeling Makes Possible

AI is changing this dynamic in a concrete, scalable way.

AI-powered contract modeling uses large language models (LLMs) to ingest managed care contracts and addendums, extracting payment rules across hundreds of agreements simultaneously. These systems identify facilities, terms, fee schedules, and reference data, then layer in external sources—including payer policies, care guidelines, and CMS regulations—to build accurate pricing models reflecting what hospitals are genuinely owed.

The key advantage over legacy contract management tools is currency. AI platforms maintain living databases updated in real time, rather than static repositories requiring manual updates every time a contract changes. For revenue cycle leaders managing dozens of active payer relationships, that real-time accuracy is operationally essential.

The application to zero-balance accounts makes the value concrete. Rather than manually selecting a subset of closed claims for review, AI contract modeling analyzes accounts at scale—comparing them against extracted contract terms to identify entire classes of claims underpaid due to payer system errors or contract misinterpretation.

Aspirion's nationwide client data shows that 79% of underpayment recoveries exceed \$1,000, with the most common recovery range falling between \$1,001 and \$2,500. Worked at volume, those recoveries represent a meaningful and largely untapped revenue stream—one that manual review and variance reports would never surface.

Five Principles for Building Recovery That Works

Revenue cycle leaders implementing AI-driven underpayment recovery should anchor their programs around these core capabilities:

Complete Contract Coverage: The AI system must process the full complexity of payer agreements—addendums, amendments, and carve-outs—not just base contract language.

Think Volume, Not Just Value: The most recoverable revenue frequently exists in systematic underpayments spread across large numbers of mid-range claims. Limiting reviews to high-dollar accounts misses the bulk of the opportunity.

Merge Contract and Clinical Review: Contract accuracy alone doesn't resolve every underpayment. The most effective programs combine contractual entitlement analysis with clinical documentation review—addressing both dimensions in each appeal.

Turn Recovery into Prevention: Understanding the root causes of underpayments—payer system errors, contract misinterpretation, billing gaps—creates intelligence that strengthens future contract negotiations and helps prevent the same losses from recurring.

Pursue the Full Spectrum: Hospitals that write off small-dollar claims leave real aggregate recoveries unrealized. AI brings the speed and scale to make those claims worth working.

Scale Through Technology, Resolution Through People

AI's role in this context is amplification. Contract modeling identifies discrepancies and surfaces recovery opportunities across large claim volumes. Resolving those opportunities—particularly where clinical considerations are involved—still requires experienced human judgment.

The most effective approach pairs AI's ability to process and analyze large datasets quickly with the expertise of trained professionals who validate findings before any action is taken. Technology handles the volume and initial analysis; experienced humans handle the judgment calls.

That combination—AI for scale, humans for expertise—is what separates effective underpayment recovery programs from those that produce opportunity lists no one has the capacity to pursue.

The Account Closed—The Question Is Whether the Revenue Has To

Zero-balance accounts aren't resolutions. They're unasked questions. For revenue cycle executives operating on thin margins, that distinction carries real financial weight—because the revenue sitting in those closed accounts was already earned, already documented, and in most cases already contractually guaranteed.

The only variable is whether the right technology and expertise are in place to recover it.

Learn more about Payment Variance Recovery at Aspirion [here](#).

**About the Author**

Liana Hamilton, Aspirion's President of Payment Variance Recovery, was most recently CEO and Founder of Boost Healthcare. She has been working with healthcare providers on revenue cycle issues for over 25 years. Prior to founding Boost Healthcare, Liana collaborated with the revenue cycle management teams of well-known names in healthcare, including HCA Healthcare, Tenet Healthcare, Sutter Health, Dignity Health, Ascension, and Trinity Health. Liana has developed and implemented positive change by helping her clients recover millions in lost revenue through her work with the No Surprises Act, Zero-Balance Review, Payment Variance, Payer Contracting, and Denials Management. She values the collaboration that comes with a strong vendor-client relationship.