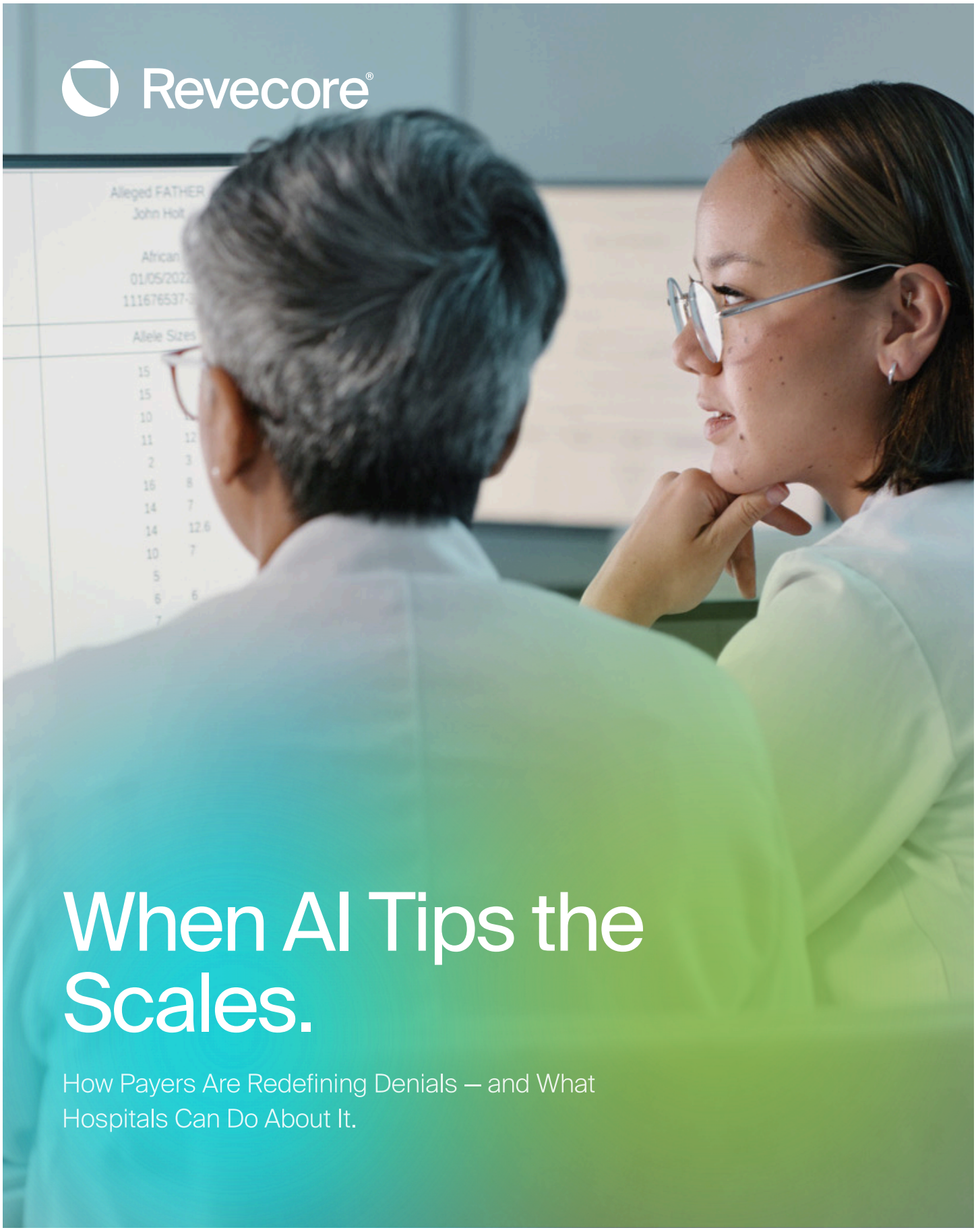

When AI Tips the Scales.

How Payers Are Redefining Denials — and What Hospitals Can Do About It.

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The stakes are higher than ever before.

The payer landscape has shifted. Rules-based claim adjudication has given way to AI-driven decision engines calibrated to minimize reimbursement — quietly, incrementally, and often below the thresholds that trigger traditional review. The result is a denial environment that looks routine on the surface and behaves very differently underneath.

Hospitals are absorbing the cost. Initial denial rates reached 11.8% in 2024, up from 10.2% a year earlier, and net revenue leakage from denials rose roughly a quarter between 2024 and 2025. Collecting money already owed has become an industry of its own — one that consumes staff, time, and margin that hospitals can no longer spare.

> "Underpayments or initial denials increased by more than 50% over a two-year period when payers began more heavily adopting AI."
>
> — Greg Hoffman, CFO, Providence · Healthcare Dive, October 2024

$43B

Spent annually by hospitals to collect payments already owed.

11.8%

Initial claim denial rate in 2024, up from 10.2% the prior year.

+25%

Net hospital revenue leakage from denials, 2024 to 2025.

This whitepaper traces how payers are using AI to decide what to deny — and whom to deny it to — and lays out a practical framework hospitals can use to recover what they are owed and reduce what leaks in the future.

SOURCES · AHA COST OF CARING 2025; KODIAK SOLUTIONS 2026; EXPERIAN HEALTH 2025; HEALTHCARE DIVE 2024

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How payers use AI to predict appeals and optimize denials.

84% of U.S. health insurers now use AI across product lines; 68% use it specifically for prior authorization (NAIC, 2025). Prior authorization is where the shift is most visible — and where the intent is best documented.

01

Algorithmic prior authorization

UHC, Humana, and CVS deployed predictive AI to manage Medicare Advantage post-acute authorizations. UHC's post-acute denial rate climbed from 8.7% to 22.7% between 2019 and 2022.

02

Optimized for more denials, not faster care

Internal UHC documents show the company approved its auto-authorization model specifically because it produced “faster review times and increased denials.”

03

Population statistics over clinical review

nH Predict benchmarks individual patients against six million historical cases to generate a predicted length of stay — substituting actuarial data for physician judgment.

04

Built for savings, not clinical need

CVS projected $10–15M in savings by reducing skilled-nursing-facility spend. Humana's post-acute denial rate ran 16× its overall prior-authorization rate in 2022.

The throughline is not efficiency. Each system was tuned, and in some cases explicitly approved, to deny more — and to do it at a speed and scale no manual review process could match.

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How payers predict who won't push back.

AI doesn't only evaluate the claim. It evaluates you. Payers model provider behavior across an entire book of business to identify which denials are least likely to be challenged — and calibrate their decisions accordingly.

Your appeal rate, by denial type

Low appeal rates signal low challenge risk. A denial you rarely fight is a denial worth issuing.

Your cost threshold

Claims that fall below your cost-to-appeal floor are safe targets — the math discourages you from pursuing them.

Your capacity signals

Response time and aging patterns proxy your team's bandwidth. Slow responses invite more aggressive decisions.

Your full claim population

Payers see patterns across all of your claims simultaneously. Your team sees a worklist, one account at a time.

> “The asymmetry is the point. A payer sees every claim you file at once; you see a queue. Closing that information gap is the difference between reacting to denials and responding to a strategy.” — Missy Harbert, Revecore Solution Advisor

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Patterns designed to go unchallenged.

Denials are no longer the whole story. A growing share of revenue loss never generates a denial flag at all — it shows up as a stalled payment, a quiet adjustment, or a claim marked "paid" for less than it was worth.

01 Post-acute AI denials

Population-based algorithms set discharge timelines and deny stays that deviate from predicted norms — regardless of physician judgment.

02 Aetna LLS repricing

Effective Jan. 1, 2026: Aetna approves admissions, then reprices 1–4 midnight stays using Milliman criteria — outside contracted DRG rates. No formal denial issued.

03 Clinical validation denials

Growth now concentrates in medical-necessity and clinical-validation disputes, requiring nurse auditors and physician advisors to resolve.

04 Sub-threshold underpayments

Claims paid below contracted rates but above the review threshold show as "paid" in A/R. Providers lose 1–11% of net revenue annually.

05 RFI-driven delays

Payer requests for information rose 5.4% in 2024; RFI-driven denials rose 9% from 2022–2024. Cash stalls without a formal denial.

06 Post-payment audits

At-risk audit amounts grew 30% year over year in 2025. RFI and medical-necessity denial amounts rose 70%.

Most of these never appear on a denials dashboard. The money is gone before anyone files an appeal — which is precisely why they work.

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Aetna LLS: repricing without a denial.

EFFECTIVE JAN. 1, 2026 · MEDICARE ADVANTAGE & SNP MEMBERS · 1–4 MIDNIGHT STAYS

HOW IT WORKS

1. Aetna approves the urgent or emergent inpatient admission.
2. For stays of 1–4 midnights, severity is reviewed against Milliman Care Guidelines (MCG).
3. If the stay doesn't meet MCG criteria, Aetna pays an observation-equivalent rate — not your contracted DRG rate.
4. No formal denial is issued. The claim shows as paid. Disputes route to arbitration.

WHY IT'S DIFFERENT

No CMS oversight triggered

Framed as a reimbursement adjustment, not a denial — bypassing federal coverage-standard rules.

Arbitration, not appeal

Disputes go to arbitration: costly, opaque, and with outcomes rarely disclosed.

Star Rating distortion

Fewer formal denials improve MA quality metrics even as payment reductions continue.

CMI suppression

DRG-level adjustments lower case mix index — depressing future reimbursement rates.

A claim that pays at a fraction of its contracted value, shows as “paid,” and routes disputes to arbitration is the clearest example of revenue lost without a denial ever being recorded.

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Your denial rate is the tip of the iceberg.

The most damaging losses leave no trace in denial reporting. The claim shows as “paid.” There is no denial flag, no worklist entry, no appeal deadline. The revenue simply never arrives — and nothing in the standard workflow points to it.

Up to 11%

Of net patient revenue lost to underpayments annually — claims that show as fully paid.

83¢

Per dollar — Medicare reimbursement in 2024, generating $100B+ in underpayments.

+126%

Rise in average coding-related denial dollar amount; DRG downgrades suppress case mix index.

36%

Of total A/R now sits over 90 days — versus a healthy benchmark under 20%.

> “Each of these erodes net revenue without ever registering as a denial. A program built only to appeal flagged denials will never see them — let alone recover them.” — Missy Harbert

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The appeal paradox: high win rate, low volume.

Most providers write off revenue they could recover — even with high win rates. When more than half of appealed denials are overturned, the problem is not whether appeals work. It is that too few denials ever get appealed.

54–70%

Of appealed denials are ultimately overturned and paid.

$57.23

Average cost to work a single denial, start to finish.

67%

Of physicians doubt an appeal will succeed.

55%

Say care can't wait for multi-week appeal timelines.

> The gap between win rates and appeal rates is a capacity, prioritization, and strategy problem — and it is exactly what payers are counting on.

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Evaluate denials by effort, probability, and impact.

Working denials by volume — oldest first, highest balance first — is not a strategy. It is managing a backlog. A defensible model weighs three questions on every claim before a single hour is spent.

Effort to appeal

Documentation complexity. Pathway: standard vs. arbitration vs. legal. Staff hours and escalation likelihood.

Probability of recovery

Overturn rate by denial type and payer. Is this a standard denial or an LLS-type repricing with no appeal path?

True financial impact

Balance vs. contracted-rate gap. DRG downgrade plus CMI suppression. Pattern frequency across your MA population.

From reactive to strategic.

REACTIVE	STRATEGIC
Work denials in order of arrival	Surface payer-level patterns across denial types
Prioritize by dollar amount or age	Prioritize by ROI: recovery probability × impact ÷ effort
Appeal claim by claim, no pattern visibility	Track payer behavior over time
Track denial rate as the primary KPI	Measure overturn rate, not just denial rate
Prevention is a separate workstream	Prevention closes the loop: root cause → documentation → fewer repeats

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Clinical expertise, AI, and closed-loop execution.

Recovery at scale is an operating model, not a tactic. Four capabilities, run as one closed loop, separate programs that recover revenue from programs that simply work a queue.

01	**Automated intake & prioritization**	Every denial categorized by type and payer, prioritized by balance, aging, and recovery potential — matched to the right expertise from day one.
02	**AI-assisted appeal development**	AI drafts cut preparation time 50%+. Payer-specific templates and clinical arguments are reviewed by a Clinical Nurse Manager before submission.
03	**Clinical and legal expertise**	Licensed RNs, certified coders, and attorneys matched to denial complexity — including legal appeals for the hardest cases, in standard contingency.
04	**Denial-to-cash execution**	Full lifecycle: appeal through receivables follow-up, escalation, cash posting, and reconciliation. Overturns convert to cash, not stalled A/R.

> When intake, expertise, execution, and prevention operate as one loop, every overturn also makes the next denial less likely.

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Tens of millions in denials recovery.

THE CHALLENGE

A large multi-hospital health system in the South needed a partner to manage appeals, surface root cause, and prevent future losses — while freeing staff for higher-value work.

THE APPROACH

Root-cause triage identified a payer with a notably high denial rate. A process change reduced denials across that payer and others. Scope then expanded to outpatient and Zero Balance Underpayment Recovery.

TOTAL REVENUE RECOVERED

$21.9M

Recovered across inpatient, outpatient, and zero-balance underpayments.

01

Root-cause triage

Identified the top leakage drivers and the payers behind them.

02

Process change

Reduced recurring denials at the source, not just on appeal.

03

Expanded scope

Inpatient, outpatient, and zero-balance underpayment recovery.

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What the largest health systems are signaling.

> "Denial and underpayment activity is still really high — even after years of added resources, technology, and targeted payer partnerships."
>
> HCA Healthcare CFO · Q1 2026 Earnings Call

> "UHS credited its ability to hold the line to sustained investment in revenue cycle technology, personnel, and process."
>
> UHS CFO Steve Filton · Q1 2026 Earnings Call

If the best-resourced systems in the country are still fighting this battle, the math is harder for every hospital without dedicated denial-management teams, accumulated payer analytics, and negotiating leverage. Specialized capability is what closes the gap.

IN SUMMARY — FOUR TAKEAWAYS

1 The payer playbook has changed.

84% of insurers use AI for utilization management. The three largest MA payers drove post-acute denials higher with predictive tools — profitably.

2 Revenue loss happens below the surface.

DRG downgrades, zero-balance underpayments, RFI delays, and LLS-type repricing erode revenue without generating denial flags.

3 Your evaluation framework changes outcomes.

Working denials by volume rather than by effort × probability × impact is how recoverable revenue gets written off.

4 Prevention is the true endgame.

Root-cause analytics that reduce future denials — not just resolve today's — is the difference between recovery and strategy.

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Five questions to take back to your team.

Q1 **What is your overturn rate, by payer and denial type?**

Denial rate tells you how often payers push back. Overturn rate tells you whether you're winning.

Q2 **Are you monitoring payment accuracy — or just A/R status?**

Zero-balance underpayments show as resolved. Without contract-level analysis, net revenue leaks silently.

Q3 **Which payers use proprietary clinical criteria — and what appeal pathways remain?**

Policies like Aetna LLS route to arbitration, not standard appeals. Knowing this changes how you respond.

Q4 **How are you prioritizing the denial worklist — and what are you writing off?**

Up to 70% of denials are paid when pursued. But $57.23 per claim means you can't work everything — priority logic determines recovery.

Q5 **Do you have root-cause visibility to reduce next month's denials — not just appeal this month's?**

Denial management without prevention is a treadmill that keeps speeding up.

If you can't answer all five with confidence, the gap is not effort — it is visibility. That is exactly where a specialized partner changes the math.

Ready to shift from defense to strategy?

Revecore helps hospitals turn invisible losses into recovered revenue — combining clinical, coding, and legal expertise with payer intelligence built over decades.

Visit revecore.com

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