



Turning the Tables:

Strategic Appeals and AI-Powered Revenue Defense

- 1** The Denials Crisis—What’s Really Happening
- 2** Mastering Payer Medical Policy Language
- 3** Using AI to Beat Payers at Their Own Game
- 4** Transforming Operations From Reactive to Strategic

Let's Calibrate Today's Conversation

Where are you today?

- Have you seen **denial rates increase** over the **last few years**?
- Are currently **using any form of automation or AI** in your **appeals process**?
- Is your **current appeals process keeping pace** with the volume and sophistication of payer denials?





The Denial Crisis

Payers are deploying AI fast.

- **12%** increase year-over-year denial volume

Volume has exceeded human capacity.

- Inpatient denials surged **220%** over 3 years
- Outpatient denials jumped **33%**
- External audit volumes **doubled**

The shift to AI is urgent.

- Only **14%** of providers are using AI to reduce denials

Source: [American Hospital Association](#); [Healthcare Financial Management Association](#); [Experian State of Claims 2025](#)

The Anatomy of Modern Payer Denials

3 Dominant Denial Patterns Driving Revenue Loss Today

To win, you need to understand what you're up against.



The Payer AI Machine: 4 Steps You Need to Understand

01



Claim Arrives

AI screens for triggers

02



Records Pulled

LLM ingests full record

03



Policy Rules Applied

*Payer criteria checked
automatically*

04



DRG Downgraded

No denial code—invisible

Why most appeals fail against this system



Generic language—not
payer-policy specific



No citation of the criteria the
AI used to deny



Human reviewers can't match
AI audit volume

Mastering Payer Medical Policy Language

Mastering Payer Medical Policy Language

Payer policies define approval criteria & the path to overturn.

Payer Medical Policy

"Per Policy MP-0340, Sepsis-3 criteria require organ dysfunction evidenced by SOFA $\geq$ 2"



Winning Appeal

"Patient SOFA score was 4 (record p.14), satisfying Policy MP-0340 Criterion 2(a). Norepinephrine initiated 02/14 (nursing notes p.31) confirms vasopressor requirement."

Evidence cited · Criterion met · Page reference included

3 Policy Sources: Know Them Before You Write An Appeal

01

Commercial Medical Policies

When: Commercial payers

Payer-published clinical criteria for each diagnosis/service. Updated regularly. The primary source, read it before every appeal.

02

InterQual & Milliman

When: Most commercial + Medicare Advantage

Third-party criteria adopted by many payers. Know which set your payer uses. It determines your entire argument structure.

03

CMS Local Coverage Decisions (LCDs)

When: Medicare & Medicaid

Defines covered indications for Medicare/Medicaid. Cite the exact LCD number and criterion satisfied. Non-negotiable reference for CMS payers.



- ✓ **AR threshold limitations** on the payer's right to audit defined by percentage of volume or total dollars
- ✓ **Defined audit timeframes** measured from date of discharge, date of first payment, or processing date
- ✓ **Audits conducted by the health plan only**, no third-party vendors or companies the health system is not contracted with
- ✓ **Single audit per claim**, regardless of audit type
- ✓ **Clear designation of which coding guidelines** govern CMS, InterQual, Milliman, or other specified source

Appeals & Dispute Rights



Right to appeal.

Including number of levels and required response timeframes

Right to third-party review.

Independent review organization (IRO), and/or arbitration

Right to be paid in full.

Before any audit begins

No refunds or recoupments.

Until all appeal timelines have expired

Require written notice with detailed audit reasoning.

An itemized bill alone is not sufficient to conduct a charge audit

It Works! Clinical Denials Case Study

Not-for-Profit Health System | 14 Hospitals | 200+ Care Locations

\$55M+

Recovered from medical
necessity denials via clinical
review + legal

CHALLENGE

- 90%+ of MedNec denials were inpatient with avg. 4-day stays
- Payers demanding observation-level billing on inpatient cases
- Readmission denials up 500%+ from 2022–2024

\$42M+

Recovered from medical
necessity denials disguised as
auth denials

SOLUTION

- Nurse reviewers strengthened every attorney-filed appeal
- State statutes applied when authorized services were denied
- Weak cases corrected before timely filing deadlines lapsed

50%

Success rate on
readmission denials;
\$6M+ recovered

KEY INSIGHTS

- \$42M was buried inside authorization denial codes
- Invisible to manual review only surfaced at scale
- Would have been written off without clinical-legal review

Using AI to Beat Payers at Their Own Game

Functions in which revenue cycle management (RCM) leaders are prioritizing or planning to implement advanced technology, % of health systems selecting function within their top five

■ Functions for which >30% of RCM leaders are planning or prioritizing to implement advanced technology



Source: McKinsey Revenue Cycle Buyers Survey, Oct 2023 (n = 333), Oct 2024 (n = 293), and Oct 2025 (n = 215)

**AI Is No Longer Optional:
Denials Are Driving the Shift**

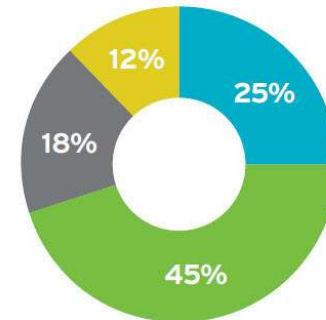
Survey Highlights Foundational Readiness for AI

US Healthcare Executive Survey

Nordic-Modern Healthcare

"Over half of the respondents acknowledged that their existing systems need further development, yet **only 15%** reported having infrastructure that is easily scalable."

Confidence in AI governance



- Very confident, we have well-established governance that we continue to build
- Somewhat confident, but improvements are needed
- Not confident, we lack a formal governance framework
- Unsure

Source: [Nordic-Modern Healthcare Executive Survey](#)

Understanding Artificial Intelligence (AI)



What Is AI?

Broad term for applications and software that simulate human intelligence in machines, particularly computer systems



Types of AI

Level 1: Rules-based system, Robotic Process Automation

Level 2: Natural Language Understanding (Siri), Processing, Computer Vision

Level 3: Generative AI (i.e., ChatGPT), Large Language Models (LLMs)



How Does It Work?

Data Ingestion: All AI requires data as input to know what to do next

Reasoning: AI follows simple rules or completes complex inference

Improvement: Some systems learn over time while others never improve



Why Now?

Cloud Computing: On-demand access to high performance compute and storage, plus powerful models

Data Proliferation: More data is available than ever before

New Tools: Step change in AI capabilities with LLMs

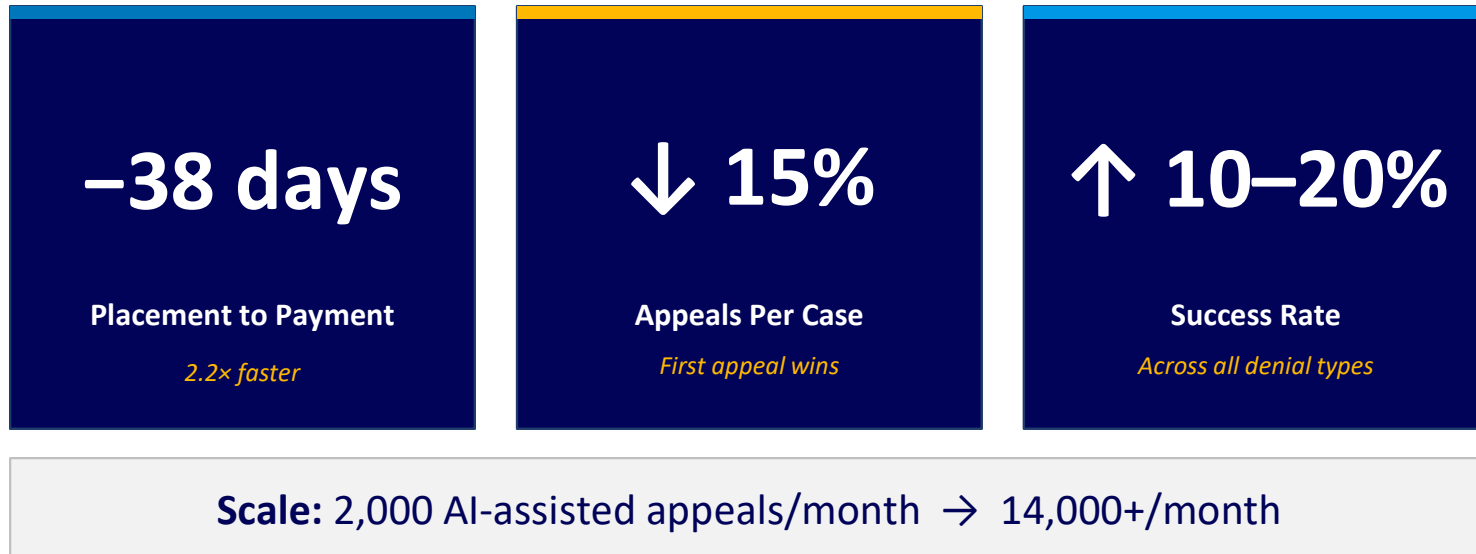
The Asymmetry Problem and How to Close It

What AI Does Well in the Appeals Context

1. High-Volume Document Review and Clinical Extraction
2. Policy-to-Documentation Matching
3. DRG & Coding Validation
4. Predictive Analytics and Upstream Prevention



Large PA Health System + Aspirion: What the Data Shows



Staff Impact: Collaboration, Not Replacement

- ✓ Clinical staff moved from extraction work to expert validation
- ✓ Higher engagement scores — more meaningful, skill-matched work
- ✓ Same headcount; dramatically more capacity for complex cases

The Mechanics of AI Appeal Generation

01

Denial Ingested

*Reason code, payer, claim data
parsed and routed*

02

Medical Record Retrieved

*Full record pulled—typically
500–1,000+ pages*

03

LLM Extracts Evidence

*Clinical findings, diagnoses, timeline,
and key physician documentation
surfaced*

Evidence Matched

*Against payer policy, care guidelines,
coding standards, contract terms*

05

Appeal Drafted

*Patient-specific argument — not a
template with variables filled in*

Human Review, Appeals & Resolves

*Credentialed clinician or attorney
validates before every transmission*

AI Evidence Extraction & Medical Necessity Analysis

What were the patient's vital signs and key lab values at ER presentation?

Based on the available information from the medical record, here are the patient's vital signs and key lab values at ER presentation:

Vital Signs:

- Temperature: 99.5 °F (37.5 °C) (8)
- Pulse: 130 (marked as abnormal) (8)
- Respiratory Rate: 28 (8)
- Blood Pressure: 124/61 (marked as abnormal, patient complaining of pain) (8)
- SpO2: 98% (8)

Key Lab Values: A CBC (Complete Blood Count) was performed, showing some abnormal results:

- White Blood Cells: 10.2 10³/uL (within normal range of 5.5 - 17.5) (40)
- Hemoglobin: 10.8 g/dL (low, normal range 11.0 - 14.0) (40)
- Hematocrit: 31.5% (low, normal range 32.0 - 42.0) (40)
- Platelet Count: 384 10³/uL (within normal range of 135 - 430) (40)
- Red Cell Distribution Width: 15.6% (high, normal range 11.5 - 14.5) (40)

It's worth noting that the CBC results are from a later time (collected at 07:25) than the initial vital signs, but they are the earliest lab values available in the provided sources.

MRN: [REDACTED] DOB: [REDACTED] Legal Sex: M
Acct #: [REDACTED]
Adm: [REDACTED] D/C: [REDACTED]

Initial Assessment (continued)

Observation

Patient Observations: groggy ([REDACTED] 1600 : [REDACTED] RN)

Oxygen Therapy

SpO2: 98 % ([REDACTED] : [REDACTED] RN)

O2 Device: None (Room air) ([REDACTED] : [REDACTED] RN)

Height/Weight

Weight - Scale: 20.6 kg (45 lb 6.6 oz) ([REDACTED] : [REDACTED] RN)

Weight Change: Initial Weight ([REDACTED] : [REDACTED] RN)

BMI (Calculated): 19.01 ([REDACTED] : [REDACTED] RN)

Advance Directives

Information Provided on Healthcare Directives: No ([REDACTED] : [REDACTED] RN)

Information on Healthcare Directives Requested: No ([REDACTED] : [REDACTED] RN)

Healthcare Agent Appointed: No ([REDACTED] : [REDACTED] RN)

Valuables

Language Assistant

AI Negotiation Letter Generation



Patient Name: Doe, John
Date of Birth: August 4, 2010
Policy No.: 483774929A
Dates of Service: April 28, 2025-May 1, 2025
Provider Name: CHS
Provider Tax ID: 56-6001393
NPI No.: 1669808564
Billed Charges: \$38,182.85
Claim No.: 584781098

Dear Claims Adjustor,

CHS is submitting a provider dispute for the above claim for additional payment.

This claim is being reimbursed to only **25%** of billed charges and CHS has reason to believe the Reasonable and Customary rate for this claim has not been determined correctly based on the "Gould criteria. CHS treated this emergent patient in good faith and as required by EMTALA. As such, (1) "Emergency services" means those services required to be covered by a health plan pursuant to Health & Safety Code sections 13459b(6), 1367(i), 1371.4, 1371.5 and Title 28, California Code of Regulations, sections 1306.67(g) and 1306.71.4.

Health plans are required to reimburse providers the "reasonable and customary" amount for non-contracted services based on the Gould Criteria:

1. The providers training, qualifications, and length of time in practice
2. The nature of the services provided
3. The fees usually charged by the provider
4. Prevailing provider rates charged in general geographic area in which services were rendered
5. Other aspects of the economics of the medical provider's practice that are relevant
6. Any unusual circumstances in the case

History of Present Illness (HPI)

John Doe is a 14-year-old male with history of sleep-disordered breathing, hypertrophy of tonsils, askynglossia, failed hearing screening, and surgically corrected polydactyly of both hands and feet. The patient began experiencing abdominal pain the day before admission, which progressively worsened and localized to the right lower quadrant. He also experienced nausea and vomited once the night before presentation. A fever was noted at home, prompting the parents to seek medical attention at an outside hospital. At the outside hospital, an ultrasound revealed appendicitis, leading to the patient's **transfer to Community Health System ("CHS") via EMS for further management**. The patient arrived at CHS around 09:25 on 12/16/2024, accompanied by his mother. Upon arrival, he was awake, alert, and complaining of intermittent abdominal pain but showed no signs of distress. The patient's vital signs on admission were elevated, with a **temperature of 99.5°F (37.5°C), pulse of 130 (marked as abnormal), respiratory rate of 28, and blood pressure of 124/61**. Physical examination and imaging were consistent with acute appendicitis. No home remedies or treatments were attempted before seeking medical care. The patient had no history of similar problems, and there was no mention of recent antibiotic use or exposure to well water, stream water, or foreign travel. During transfer, antibiotics were not administered due to time constraints, but were to be given upon arrival at CHS. An intravenous line was intact in the left antecubital area, and intravenous fluids were started as ordered. **The patient's condition was found to be more severe than initially thought, with the postoperative diagnosis revealing perforated appendicitis with abscess formation.**

ER Course

Upon arrival at CHS, the patient underwent further evaluation for suspected acute appendicitis. An ultrasound of the appendix was performed, revealing a blind-ending fluid-filled tubular structure in the right lower quadrant measuring 1.1 x 0.9 cm with surrounding echogenic fat, consistent with an inflamed appendix. No periappendiceal fluid collection or abscess was observed at this time. Laboratory tests were conducted, including a complete blood count which showed **elevated white blood cell count of 10.2 10⁹/dL, low hemoglobin of 10.8 g/dL, and low hematocrit of 31.5%**. The patient's condition was assessed as requiring surgical intervention, and the decision was made to proceed with a laparoscopic appendectomy.

Hospital Course

The patient was admitted to the CHS General Pediatrics unit for urgent management of acute appendicitis. A laparoscopic appendectomy was performed under general endotracheal anesthesia. **Intraoperatively, a perforated appendix with abscess was discovered**, indicating a more severe condition than initially suspected. The surgery was completed successfully with minimal blood loss.

Acute Perforated Appendicitis

Postoperatively, the patient was closely monitored and managed with a comprehensive treatment plan. On post-operative day 1, the patient advanced to a clear liquid diet, which was well-tolerated. By post-operative day 2, the patient progressed to a regular diet, although with decreased appetite initially. Pain management was achieved using a combination of acetaminophen and ibuprofen. The patient's condition steadily improved over the course of hospitalization, with no reported fevers, chills, chest pain, or shortness of breath. The ICU unit requires the highest level of resources and is costly to maintain especially with the current labor shortage and the cost of traveling nurses.

Antimicrobial therapy was a crucial component of the treatment, with the patient receiving **ceftriaxone 1,032 mg intravenous every 24 hours** to prevent postoperative infections. Additional medications administered during the hospital stay included ondansetron for nausea control and dexamethasone to reduce inflammation.

Throughout the hospital course, the patient's pain was well-controlled, and he was able to void urine without difficulty. Positive bowel movements and flatus were noted, indicating the return of normal gastrointestinal function. The patient was encouraged to ambulate as appropriate, which he did successfully.

A multidisciplinary approach was employed in the patient's care. Social Work attempted an initial assessment for discharge planning, while a Child Life Specialist provided support and activities both pre- and post-surgery to help manage the patient's emotional and psychological well-being during the hospital stay.

By post-operative day 6, the patient had made significant progress. He was tolerating a normal amount of food, and his repeat **white blood cell count had normalized to 10.2**. With these improvements and no signs of complications, the patient was cleared for discharge.

The patient was discharged home in good condition after a 6-day hospital stay. Discharge instructions included resuming a regular diet, managing pain with Tylenol and/or Motrin as needed, proper wound care, and activity restrictions for two weeks. A follow-up appointment was scheduled with the pediatric surgeon in 2 weeks to ensure continued recovery and address any potential concerns.

Admission Date:

- April 28, 2025

Discharge Date:

- May 1, 2025

Diagnosis:

- Acute appendicitis
- Laparoscopic appendectomy
- Perforated appendix with abscess
- Acute perforated suppurative appendicitis and acute serositis

Clinical Scoring Systems:

1. Fall Risk Assessment
 - Evaluated:
 - Confusion/Disorientation/Impulsivity
 - Depression
 - Altered Elimination
 - Dizziness/Vertigo
 - Gender
 - Antiepileptics Admin/Prescribed
 - Benzodiazepines Admin/Prescribed
2. Braden Scale
 - Used to assess pressure injury risk
 - Patient not admitted with a pressure injury
3. VTE SCORE
 - Mentioned, no details provided
4. ADL Screening
 - Assessed:
 - Hearing and visual impairment
 - Vision
 - Judgment
 - Memory adequacy
 - Ability to express needs/desires
 - Dressing
 - Grooming
 - Feeding
 - Bathing
 - Toileting capabilities
 - New onset unsteady gait/balance
5. FLACC Scale
 - Used for pain assessment in children
6. Fire Risk Safety Assessment
 - Score: 2 - LOW level risk of fire during surgical procedure

Orders Placed:

- Tissue Exam - Appendix
- Airway
- CBC ONLY

Provided Care:

- Patient arrived and admitted to the hospital
- Initial care provided, intravenous line started, surgical team notified
- Inpatient admission order placed
- Laparoscopic appendectomy performed
- Transfer to Pediatric bed type ordered
- Tissue examination order placed
- Updated inpatient admission with revised diagnosis
- Discharge instructions provided by Resident
- Discharge order placed

Consults:

- No consults mentioned

CHS requests that this claim be reviewed for further reimbursement and documentation from the calculate of the Reasonable and Customary rate based on each of the six criteria be provided. Please provide an explanation of how the member's plan determined contractual obligation of the plan for this claim.

Additionally, our review determined that CHS's average commercial reimbursement for this level of service and type of claim is greater than what was paid by Payer. CHS is focused on providing services and care to CHS Members and does not traditionally contract with commercial payers. For this reason, CHS has not spent significant resources on Strategic Pricing initiatives or consulting services and considers CHS billed charges to be below market level.

The median payment accepted/QPA, based on a 2019 review of single case agreements, commercial payer payments, total charges, and the complexity and acuity of the services provided ranges from 80% to 95% of billed charges. Please see the current reimbursement of our claim below.

Total Charges: \$38,182.85
Expected Payment: \$35,680.98
Patient Payment: \$2,501.87
Insurance Payment: \$7,043.84

Payment Due: \$28,636.69

We are expecting a proper payment adjustment on this claim for 100% of billed charges. If you have further questions, need additional information, or would like to negotiate a single case agreement please do not hesitate.

Best regards,

Jane Doe
NSA Claims Negotiator
Ph: (351) 281-8591
Email: jane.doe@aspirion.com

Transforming Operations From Reactive to Strategic

Staff + AI: The Collaboration That Changes the Job

The most important outcome is not efficiency—it's what your team does with the capacity that AI frees up.

BEFORE AI		WITH AI
X ~70% of time: searching medical records		✓ ~70% of time: expert review + validation
X Triage: decide which denials to fight	➔	✓ Every denial gets a quality response
X Generic appeals under volume pressure		✓ Policy-aligned appeals, consistently
X Capacity tied to headcount		✓ 7× throughput — same headcount

The Provider Perspective

Implementation Realities

- **Data Quality is Non-Negotiable**
- **Clinical Expertise Cannot Be Replaced, Only Augmented**
- **Change Management is as important as Technology**
- **Health Systems that Win Start with Clarity.**

Four Pillars of a Sustainable AI Strategy



1. PROBLEM



**2. DATA
FOUNDATION**



**3. TECHNICAL
INFRASTRUCTURE**



**4. HUMAN
CAPITAL**

Key Takeaways

Payer Policy Language

Use payer policy language, not just clinical language.

Human-in-the-Loop

Human validation is non-negotiable.



AI Packs Power

AI delivers policy-aligned appeals at payer-matching scale.

Staff Engagement

Staff engagement improves not decreases when done right.

THANK YOU

Questions & Answers

