

The Billing Error Baseline

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The Billing Error Baseline: What the Public Data Actually Shows

Published estimates of medical billing errors range from 7 percent to 80 percent. Here is why, which numbers are defensible, and what Abundera will measure in Q3 2027.

TL;DR

- The often-cited “80% of medical bills contain errors” figure is real, but it counts every discrepancy including minor coding differences that do not affect the patient. It should not be confused with the overcharge rate.
- CMS’s FY 2025 figures put the Medicare Fee-for-Service improper payment rate at 6.55 percent, totaling \$28.83 billion, down from 7.66 percent. Medicaid rose to 6.12 percent, or \$37.39 billion in federal funds, and 77.17 percent of that was insufficient documentation rather than fraud or abuse.
- The average hospital bill over \$10,000 contains roughly \$1,300 in overcharges, based on third-party audits.
- Initial claim denial rates rose from 10.2 percent a few years ago to 11.8 percent in 2024.
- 83 of 100 sampled high-revenue hospitals were non-compliant with at least one major provision of the CMS price transparency rule (Gondi et al.); CMS’s own reviews through June 2025 found 65 percent had drawn at least one warning notice.
- Abundera’s Q3 2027 report will publish aggregate error and appeal-success data from the platform’s first full year of patient-side audits. This article pre-registers the methodology.

Amendment 2: CMS figures refreshed to FY 2025 (August 22, 2026)

The improper-payment section originally reported FY 2024. CMS published the FY 2025 figures on 15 January 2026 and this article now carries them, with FY 2024 retained alongside so the direction of travel is visible. The headline change: Medicare Fee-for-Service improved to 6.55 percent while Medicaid, Part C, Part D and CHIP all rose, taking the core-program total from roughly \$85 billion to roughly \$94 billion. No conclusion in this article changes. The methodology registered below is unchanged.

Amendment 1: release deferred (August 19, 2026)

This article pre-registered the first annual Billing Error Baseline for September 2026. That release is deferred. The revised target is Q3 2027.

The reason is sample size. The metrics registered below are reported by hospital category, payer type and bill size bucket. Cutting the platform’s current volume of completed patient-side audits along three dimensions produces cells too small to publish a defensible median, and a median computed on a handful of bills is a number that would be quoted for years.

We considered publishing the aggregate without the breakouts. We decided against it. The breakouts are where the useful information is, because a single blended error rate across academic medical centers and specialty clinics does not tell a patient anything actionable.

Nothing else in the pre-registration changes. The six metrics, the definitions, the exclusion of individual bills and providers, and the commitment to publish findings that do not favor the product all stand as originally written.

We are recording this here rather than letting the date pass without comment. A pre-registered date that is quietly missed is worth less than one that is amended in public, and the amendment is the part that makes the original commitment meaningful.

The problem with “80 percent”

The number gets cited in every consumer-advocacy article about medical billing. It comes from older surveys, often conducted by billing-audit vendors, that counted any discrepancy as an error. A diagnosis code that should have been 99213 but was billed as 99214. A line item with a typo. A date misformatted.

Most of those discrepancies do not change what the patient owes. They affect the provider's reimbursement but not the consumer's exposure. That is a legitimate thing to measure, but it is not what a patient means when they ask, “Was I overcharged?”

The more careful question is: **what percentage of patient-facing bills contain an error that increases what the patient owes, and by how much?**

That is a different number, and a harder one.

What the CMS improper payment reports say

The Centers for Medicare and Medicaid Services publishes improper payment rates each fiscal year. These are audited, reproducible, and carry a specific legal definition: a payment that should not have been made, or was made in the wrong amount, under a statutory, regulatory, contractual, or administrative requirement.

For FY 2025, with FY 2024 alongside:

Program	FY 2025	FY 2024
Medicare Fee-for-Service	6.55 percent, \$28.83 billion	7.66 percent, \$31.70 billion
Medicare Advantage (Part C)	6.09 percent, \$23.67 billion	5.61 percent, \$19.07 billion
Medicare Part D	4.00 percent, \$4.23 billion	3.70 percent, \$3.58 billion
Medicaid (federal share)	6.12 percent, \$37.39 billion	5.09 percent, \$31.10 billion
CHIP	7.05 percent, \$1.37 billion	6.11 percent, \$1.07 billion

Add it up and the federal government acknowledges roughly **\$94 billion in improper payments in a single fiscal year** across core health programs, up from about \$85 billion the year before. Only Medicare Fee-for-Service improved.

CMS's own breakdown is the strongest available support for the distinction this article is drawing. Of the FY 2025 Medicaid improper payments, **77.17 percent were the result of insufficient documentation**, which CMS states is generally not indicative of fraud or abuse. An improper payment is a paperwork finding far more often than it is a patient being overcharged, which is exactly why the headline error rates cannot be read as overcharge rates. Not all of those are overcharges to patients. Many are documentation deficiencies that would not change the patient's bill. But the floor is defensible and the number is substantial.

What the patient-facing data shows

The numbers that matter to a consumer are different. A 2024 American Journal of Managed Care survey found that patient-reported billing disputes are common, appeals succeed more often than patients expect, and insurers use aggressive collection tactics that deter disputes even when the bill is wrong.

Third-party audits of individual bills, when they are performed, consistently find errors. The median hospital bill over \$10,000 audited by a patient-advocacy firm contains around \$1,300 in overcharges. That does not mean every \$10,000 bill is wrong by \$1,300. It means roughly half the bills audited are wrong by at least that much. The distribution is skewed by a small number of very large errors.

There is also the denial-rate story. Insurance companies denied 11.8 percent of initial claims in 2024, up from 10.2 percent a few years earlier. Most of those denials are reversible on appeal. Patients who appeal typically win more than half the time. Patients who do not appeal simply pay.

Most medical billing errors are not discovered because the patient paid the bill before anyone audited it.

Why the range of estimates is so wide

Three forces drive the spread.

First, **what counts as an error**. A provider-side coding review will count different things than a patient-side overcharge audit. A CMS improper-payment definition is different again. An academic study measuring out-of-pocket errors uses yet another definition.

Second, **who performs the audit**. Billing-audit vendors have commercial incentives to find errors. Hospital internal audits have incentives to find fewer. Academic studies sit somewhere in the middle. Each data source carries its own bias.

Third, **which bills get audited at all**. Most medical bills are paid without review. The bills that get audited are disproportionately large, disputed, or flagged by the patient as unusual. A 23 percent error rate measured from an audited sample does not mean 23 percent of all bills have errors. It means 23 percent of the small subset that got a second look did.

This is the measurement problem Abundera is built to close.

The price transparency context

In 2021, CMS required hospitals to publish machine-readable price data. The theory was that patients could shop. Gondi and colleagues sampled 100 of the 6,171 highest-revenue U.S. hospitals and found **83 non-compliant with at least one major requirement** of the rule. CMS's own enforcement record points the same way: of the 3,764 distinct hospitals it had comprehensively reviewed through 30 June 2025, **35 percent met the requirements and 65 percent had received at least one warning notice or request**. Enforcement of tightened requirements began 1 April 2026. Separately, KFF finds that the files hospitals do publish are inconsistent and non-standardised enough to be effectively unusable for consumer comparison, which is a different failure from not publishing at all and arguably the more durable one.

This matters for billing-error detection because comparative data is how errors get found in the first place. If a hospital's chargemaster is unreadable, a patient cannot tell whether the \$42,000 line item for "laboratory composite" is a bundled price or a typo.

Price transparency is a prerequisite for error detection at scale. It is not yet there.

What Abundera will measure

Abundera is a consumer-side audit platform. Users grant the system permission to ingest their medical bills, insurance Explanations of Benefits, and, where applicable, hospital chargemaster data. The system runs automated checks for common error patterns: duplicate line items, upcoding (billing a higher-cost procedure code than the documentation supports), unbundling (splitting a bundled procedure into separately-billed components), out-of-network pricing on supposedly in-network claims, and balance billing that violates state or federal surprise-billing law.

When the system flags a discrepancy, it drafts a dispute letter and, with the user's approval, sends it to the provider's billing office or the insurance company. Abundera tracks whether the appeal succeeds and by how much the final bill was reduced.

Every analysis is tied to an actual bill the user owes. Not a provider-side coding review, not a statistical estimate. Real dollars the user was asked to pay and the dollars they did not pay after the appeal.

Pre-registration (as originally filed, target Q3 2026; see Amendment 1)

In September 2026, Abundera Research will publish the first annual Billing Error Baseline. (Superseded by Amendment 1 above. The revised target is Q3 2027. The metrics listed here are unchanged.) The report will contain the following metrics, broken out by hospital category (academic medical center, nonprofit community, for-profit system, specialty clinic), by payer type (commercial insurance, Medicare, Medicaid, self-pay), and by bill size bucket:

1. **Patient-facing error detection rate.** The percentage of bills submitted to the platform in which Abundera's automated checks flagged at least one discrepancy.
2. **Appeal initiation rate.** Of flagged bills, the percentage where the user authorized a dispute letter.
3. **Appeal success rate.** Of disputes sent, the percentage where the provider or insurer reduced the bill.
4. **Median overcharge per flagged bill.** In dollars.
5. **Median recovery per successful appeal.** In dollars.
6. **Time to resolution.** Median days from dispute sent to final bill adjustment.

We will publish the aggregate numbers, the methodology, and the sample-size caveats. We will not publish individual bills, providers, or identifying details about users. We will make the methodology available for external review before the report lands.

If the aggregate findings show the product is not helping in some category, we will publish that too. This research is independent of the product. Abundera Research reports what the data says, not what the marketing team wants the data to say.

References

- Centers for Medicare and Medicaid Services, *Fiscal Year 2025 Improper Payments Fact Sheet*, 15 January 2026 (cms.gov)
- Centers for Medicare and Medicaid Services, *Medicare Fee-for-Service 2024 Improper Payments Report* (cms.gov)
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- Gondi, S. et al., *Early Hospital Compliance With Federal Requirements for Price Transparency*, JAMA Internal Medicine (jamanetwork.com)
- Centers for Medicare and Medicaid Services, *Hospital Price Transparency enforcement activities and outcomes*, through 30 June 2025 (cms.gov)
- Kaiser Family Foundation / Peterson-KFF Health System Tracker, *Ongoing Challenges with Hospital Price Transparency* (healthsystemtracker.org)
- American Medical Association, *AMA Recurring CPT Code Accuracy Findings* (ama-assn.org)

Abundera Research is the independent research arm of Abundera, Inc. The Q3 2027 Billing Error Baseline report will be published under the same methodology described here. Press and data-access inquiries: research@abundera.ai.