

The key to detecting fraud and abuse in medical billing

A comprehensive approach that includes clinical insight and medical logic

Executive summary

The people fighting fraud and abuse in medical claims have a tough challenge due to the current United States medical reimbursement system. Although the overwhelming majority of providers consistently submit honest and accurate claims, a small fraction succumbs to the financial incentive to exaggerate the complexity and quantity of billed services. These inaccuracies are seldom detected without a special effort. Patients are poor auditors of their own care, since most are largely insulated from the actual costs and the impact of unethical practices. In addition, the usual “pay and chase” method of pursuing recovery of funds, while efficient at finding outright fraud, is less successful with cases of overbilling. Why? Because it can be hard to distinguish true fraud or overbilling from the normal variability across providers, specialties, and geographic regions. In truth, fraud and abuse cannot be detected accurately using a purely claim-based approach. Instead, the accurate assessment of claims must include all data elements that affect medical payments, including clinical insight and medical logic.

From the Code of Hammurabi and the Hippocratic Oath to the American Medical Association (AMA) Code of Ethics, medicine has a long tradition of formally mandating the proper behavior of practitioners. Although prohibitions of particular kinds of professional behavior have changed over time, the official standards and practices of medicine, pharmacy, and nursing have maintained that honorable and honest behavior is a necessary component of professional practice.

To some extent in recent times, this traditional self-regulation has been replaced with legal proscriptions, e.g., on self-referral, and with regulations that control the financial relationships of medical practice and medical service entities. But ethical standards remain important, especially in a fee-for-service system of medical reimbursement, which has the effect of producing more revenue for each unit of additional service. That effect can be a disincentive to ethical behavior.

A full spectrum of fraud, errors, and abuse



Underutilization

Optimal utilization

Overutilization

Medically unnecessary

Abusive billing practices

Fraud

Providers and the manipulation of reimbursement

As the second party in many health care transactions, physicians generally resist what they consider inappropriate restrictions on medical coverage by payers. There have been some attempts to measure this resistance. A national survey of physicians in 1998 found that 39 percent reported “manipulating reimbursement rules so patients can receive care that physicians perceive is necessary.”¹ More than half of those disclosing such behavior also reported increasing this type of informational distortion during the preceding five years. Similarly, many hospitals also manipulate reimbursements, according to Centers for Medicare & Medicaid Services (CMS) audits and federal investigations that have resulted in large fines. All told, experts estimate that the actual incidence of fraud, waste, and abuse is five to 10 times the rate of financial recoveries.^{2,3}

The patient cannot be the auditor

Another aspect of today's system of third-party payments can also work against ethical behavior: patients are largely insulated from actual medical costs and therefore from waste, fraud, and abuse in medical payments. Patients often lack the knowledge and incentive to audit a statement that explains, in incomprehensible detail, the expenditure of someone else's money. High-deductible health plans may act to shift the incentives, and insurance premiums (and taxes) will almost certainly rise, but for the foreseeable future, an overwhelming majority of people enrolled in benefit plans will remain shielded from the real impact of medical care charges.

For these reasons, it remains the health plan's responsibility to act in the place of the astute consumer, and to replace perverse financial incentives with efficient systems, purposeful oversight, and effective monitoring to combat fraud and abuse.

What's fraud? What's abuse?

The phrase “fraud and abuse” is often used to describe a broad range of reimbursement issues, ranging from duplicated services and informational-but-not-actionable testing to exaggerated complexity and misrepresented services, and all the way to services or products billed but not provided or supplied. The last three—exaggerated complexity, misrepresented services, and services or products billed but not provided or supplied—share a factual misrepresentation and the submission of a financial claim for a service that did not actually occur or a product that was not actually prescribed or used.

Combating fraud and abuse: the special investigative unit is not enough

The usual method for addressing suspected fraudulent or abusive claims is with a special investigative unit (SIU), sometimes called a fraud control unit. These groups respond to tips from a variety of sources and use conventional surveillance techniques. When they find fraudulent billing, these teams then proceed to recover funds and to prevent further inaccurate payments. A scheme, once verified as fraud or abuse, can be identified as a known pattern. When possible, adjustments are made to payment policies, claims systems, or credentialing systems to prevent recurrences.

While efficient at finding fraud, this retrospective approach (commonly called “pay and chase”) is inefficient in finding the overbilling abuse that results when a hospital or medical professional exaggerates claims just enough to generate extra revenue. Such claims look exactly like those for sick patients receiving intensive, appropriate, and proven treatment. Remember that national survey of physicians? More than one-third admitted to manipulating information affecting reimbursement. Depending upon the extent of this exaggeration, such misrepresentations can go undetected for years.

In addition, this retrospective approach is of limited use against a specific type of medical fraud: the rapid acceleration of high-dollar claims for entirely fictitious services, medical supplies, and devices. Often, before an aberrant claim pattern is detected, the storefront is gone, the bank account is closed, and that provider identity is never again seen in the company's claim system.

The difficulty of identifying abusive claims

Variations in billing practices cannot be automatically identified as billing abuse or inappropriate medical utilization. Medical services are complex, they are applied to individual biologic systems, they depend on techniques that vary widely, and their outcomes are sometimes measured by imprecise methodologies. Consequently, variability among physicians in the same specialty across different communities is famously high. Multiple studies by Dr. Jack Wennberg and his colleagues at the Dartmouth Atlas Project have demonstrated variations as high as 400 percent in the frequency of major procedures across different regions of the country, including tonsillectomy, spinal surgery, and end-of-life hospital days.⁴ With this much variation, there is plenty of room for a provider to adjust medical or billing practices to enhance revenue without detection.

There is a similar spectrum of disease severity and treatment intensity within each hospital catchment area, home health service area, and physician practice. Any analytic technique used to detect fraud and abuse must recognize this natural distribution of disease burden. There will be some genuine differences in the mean disease burden among providers' patients in that distribution, although many providers may claim that "my patients are sicker than average." Statistically, of course, this can be true for only about half of a given population.

Categories of data analysis

The basic categories of claim analysis are:

Claim-centric: Looking only at the data within a claim, does the claim make logical sense considering all coding and payment rules? In other words, do the services provided make sense considering the diagnosis, age, and gender of the patient?

Member-centric: Looking at all the claims for this member, do the services and diagnoses presented make sense? Does the data represent a reasonable temporal scenario, and does the distribution of specialty-specific or provider-specialty services make clinical sense?

Provider-centric: Among all the claims for a physician or hospital, does the distribution of service type and disease entities fit the known distribution of services provided in that medical community? Within this type of analysis, it is important to understand the wide variability of medical utilization and service patterns across different regions of the United States.

Network analysis: Using a combination of member-centric and provider-centric analysis, do the diagnoses and services provided for common pools of patients shared across providers make sense?

Evaluating four situations

Let's use four examples of medical practices and facilities with unusual claims activity to see how different approaches to scrutinizing claims might work:

A. A contracted, credentialed physician performs complex services very unlike peers in that medical specialty.

B. A long-standing, contracted home infusion vendor suddenly shows an alteration in trend: billing new codes, representing frequent, expensive services, differing significantly from the previous pattern.

C. A non-contracted physician submits bills for out-of-network services in a pattern that does not align with peers in the same medical specialty.

D. A community hospital contracted with a severity-diagnosis-related group (severity-DRG) system has an extraordinarily high proportion of complicated cases in several disease categories.

Despite the variety of these examples, there are factors common to all four:

- Each provides substantial additional revenue for the hospital or physician
- In each of the scenarios, a diagnosis is supplied on the bill for medical services to justify and substantiate the need for the medical services
- The patient populations treated in these scenarios incur higher expenditures

Distinguishing the difference

Any of the purely statistical or financial methods described above for the analysis of these unusual billing patterns would be incomplete. All four examples could have a reasonable explanation for unusual billing patterns supported by completely accurate and non-exaggerated records of care. Extraordinary clinical circumstances might justify the outlier status of each of these:

A. The contracted, credentialed ENT physician or otolaryngologist specializes in the surgical treatment of acoustic neuromas. This is one of only three such practices within a geographic area with a population of 24 million people. Analysis of the diagnoses and the conditions on associated claims for these patients would reveal this very specific and unique clinical issue. A purely statistical analysis would reveal only an unusual or outlier set of claims, while an integrated clinical/statistical approach would show that this physician attracts serious and severe cases because of his or her special surgical expertise.

B. The home infusion vendor has a new referral pattern with a specialty cancer hospital's new branch in a new county. Not only is the new business relationship relevant, but it is also necessary to perform an analysis of the diseases treated and services provided. It takes clinical judgment to put these new claim patterns into the correct context. Perhaps this new acceleration into different service patterns is completely explained by an analysis of claims for these patients from other providers.

C. The non-contracted physician is nationally recognized as a prominent expert in the field and is the chairperson of surgical oncology at the university medical center. Because of his or her special expertise and the disease that he or she "attracts" to his or her practice, a purely statistical assignment into a peer group may be inaccurate. In fact, he or she may legitimately have only a handful of peers in the nation or in the world. Clinical logic will dictate exception from, or modification to, standard statistical processes.

D. The community hospital has, over the past six years, recruited new medical specialists and has developed several lines of service to provide high-level care in several disease categories. A verification of the context of these claims, specifically for the consistency within known patterns of disease and episodes of treatment, adds the relevant clinical information that verifies the legitimacy of the acceleration and transformation of claim patterns in this case.

On the other hand, the examples might represent misrepresentation or fraud:

- A. The physician's office manager or biller may be submitting additional expensive service codes in connection with an embezzlement scheme.
- B. The home infusion vendor, under new management, may be billing for more frequent, more expensive, or fictitious services, in collusion with a collaborating physician.
- C. The non-contracted physician billing might not actually represent the licensed physician. This supposedly separate practice location may be fictitious, and the patients for whom services are billed are taken from a list of stolen enrollment information.
- D. The community hospital may be engaged in purposeful misrepresentation of diagnoses with the goal of increasing payment via more severe DRG grouper categorization.

For all four of these examples, understanding the clinical issues adds significant value to a purely statistical analysis. Any analysis of claims to detect misrepresentation must combine statistical as well as clinical logic; both are necessary to provide the insight to distinguish honest from dishonest claims.

Requirements of a good system for fraud detection and prevention

A comprehensive system to detect and prevent payment of misrepresented, exaggerated, or fraudulent claims must include the right combination of:

- Financial analysis
- Business/relationship analysis
- Medical insight and analysis
- Detection of changing behaviors
- A feedback loop that "learns", applying knowledge gained from claim surveillance that allows detection mechanisms to continually improve, keeping pace with newly evolving fraud schemes

Systems for administering the complex set of coding rules such as the American Medical Association's CPT® codes and the Correct Coding Initiative (CCI) are widespread, but many lack a systematic monitor for abusive and fraudulent billing practices. As a result of the variability in disease and treatment patterns described earlier, medical logic and clinical insight are essential components of any analytic system that attempts to detect abusive billing practices. A believable claim will be internally consistent, with a diagnosis to explain the service provided.

A statistical analysis can point us to a claim or to a group of claims that are extraordinary, even within a provider specialty or within a set of treatment episodes. But are these claims extraordinary because of a rare medical coincidence? A surgical complication? The answer is not always just to review the claim. A claim analysis that looks for context, that searches for independent verification of diagnostic and therapeutic claim data, is a system that

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A comprehensive approach to fighting fraud



gives statistical and data-mining techniques the “medical insight” necessary to identify only those claims that have a high likelihood for misrepresentation.

Without this clinical insight, efforts to detect aberrant, abusive coding practices just by analyzing financial or coding data from claims will not yield significant results. Instead, such efforts will largely identify claims for care provided to the sickest patients along with an identification of the specialty physicians and hospitals caring for them. Thus, we will find an abundance of claims from oncologists, cardiothoracic surgeons, ICU and neonatal units, and specialty hospitals. Such an approach will not do a good job of distinguishing the statistical outliers that represent genuine catastrophic injury and illness from those that represent abusive or fraudulent medical billing.

Building accurate, relevant tools

Such a comprehensive approach will do a better job of accounting for the several sources of variability in medical claims data. For example, such a mechanism could be used to determine whether extraordinary codes make sense given the other claims information submitted from this practice, and whether the claim data makes sense in the context of claims from other medical providers. Single-case analysis with these combined tools is possible, of course, but such medical analysis need not consist entirely of manual chart review. It is far more efficient to build software tools to conduct large-scale screenings to detect abusive and fraudulent variants.

Therefore, the goal is a filtering mechanism that applies medical insight and logic to identify claims that merit further individual review. Such a filter can be used both retrospectively to query paid claims and prospectively for pre-payment loss prevention.

While traditionally fraud control has been implemented as a retrospective process, the most effective cost-control mechanism is a pre-payment detection of dishonest or erroneous claims.

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A prospective implementation catches these “hit-and-run” schemes, where claims from a “phantom provider” accelerate for weeks and then stop. A comprehensive pre-payment fraud detection scheme can differentiate a payer as a hard target, one that dishonest medical billers avoid because claim submission results only in suspension, query, and unwelcome attention.

Conclusion

To summarize, any fraud detection system must address all of the following environmental elements:

- The abusive vendor’s goal: revenue enhancement. There must be a measure of financial magnitude, corrected for all of the legitimate reasons for high-dollar claims
- Compensation for observed variations in genuine disease severity, along with indicators of treatment severity
- For the foreseeable future, an acknowledgement of highly variable regional care patterns
- Complete integration with standard and customized coding rules
- Alignment with, and adjustment for, specific contractual stipulations
- Sufficient logic in a claim-centric context to detect claims that represent unusual or unrealistic events, beyond the scope of detectable disease variation and known treatment variability
- A systematic assessment of the illness-injury/treatment episode within a member-centric context, including time dimensions, provider mix, and the order of services, including detection of impossible episodes of care like a second appendectomy

- Categorization of physicians, facilities, and ancillary providers within a meaningful specialty assignment, accounting for the actual specialty mixture found in the medical community

The payer who is a hardened target for the continuous onslaught of fraudulent claims presents integrated pre-payment processes that accurately deny clearly fraudulent claims and suspend suspicious claims for investigation, while allowing for and understanding the normal dimensions of variability for disease and medical care. These systems learn from experience and integrate fully with contract management, claims editing, and utilization review. Pre-payment and post-payment review functions are integrated, and their results are fed into the creation and maintenance of payment- and coverage-review policies.

Why OptumInsight

Tremendous opportunities exist to reduce inaccuracies, abuse, and fraud in medical reimbursements. To make the most of those opportunities, OptumInsight offers unique software solutions and services that leverage market-leading approaches to measuring risk and process automation, as well as vast experience with the practical implementation of health plan technologies.

OptumInsight has the largest industry normative database in the country to analyze variations and identify improvement opportunities. Our diverse portfolio of products and services converts data into actionable, fact-based intelligence for nearly every U.S. health care organization and more than 250,000 clients worldwide.

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