

The Good, the Bad, and the Ugly: A Story of Complacency, Struggle, and Advancement

The Payment Integrity (PI) industry plays a critical role in US healthcare, ensuring that claims adjudication is precise and that physicians and health systems are reimbursed correctly for care delivery. PI has become a proven tool to enhance affordability in our healthcare system.

The consolidation of private healthcare provider systems has led to the emergence of larger, more sophisticated organizations. These pooling activities have enabled increased capital investments and access to advanced technologies like AI. This new market condition has resulted in a significant improvement in providers' billing and collection results. The future for PI operations looks challenging, with nearly all US hospitals planning to integrate AI into their revenue cycle management (RCM) activities within three to five years. (1)

The increasing use of AI revenue cycle (billing) technologies highlight the pressing need to address the growing problems of healthcare waste and abuse. According to a study by the AMA, the annual cost of wasteful spending ranges from \$760 billion to \$935 billion, or nearly one-quarter of total healthcare spending (2). The scale of these figures clearly emphasizes the importance of strong payment integrity capabilities.



Threats such as fraud, waste, abuse, excessive care, and failures in care coordination have become more complex to detect, increasing the burden of healthcare costs.

Furthermore, these challenges pose a substantial risk of general economic loss and patient harm, a harsh reality. It is crucial to address and mitigate these proactively increasing risks by implementing robust Payment Integrity (PI) measures, including advanced tools and techniques to detect and counteract these issues.

While the progress in identifying new PI recovery opportunities have been slow, the recent advancements in generative artificial intelligence (GenAI) offers a compelling opportunity for a 21st-century transformation in detecting previously unseen improper payment activities.

Indeed, Cogitativo acknowledges that given the recent developments in cybersecurity penetration testing, or the “pentest” market, generative AI (GenAI) provides a compelling solution for detecting and remediating improper payment vulnerabilities within payors’ claim systems.

Now is the time to adopt this pentest market approach. Its ability to simulate real-world scenarios facilitates the development of advanced tools capable of detecting a more comprehensive range of zero-day PI vulnerabilities.



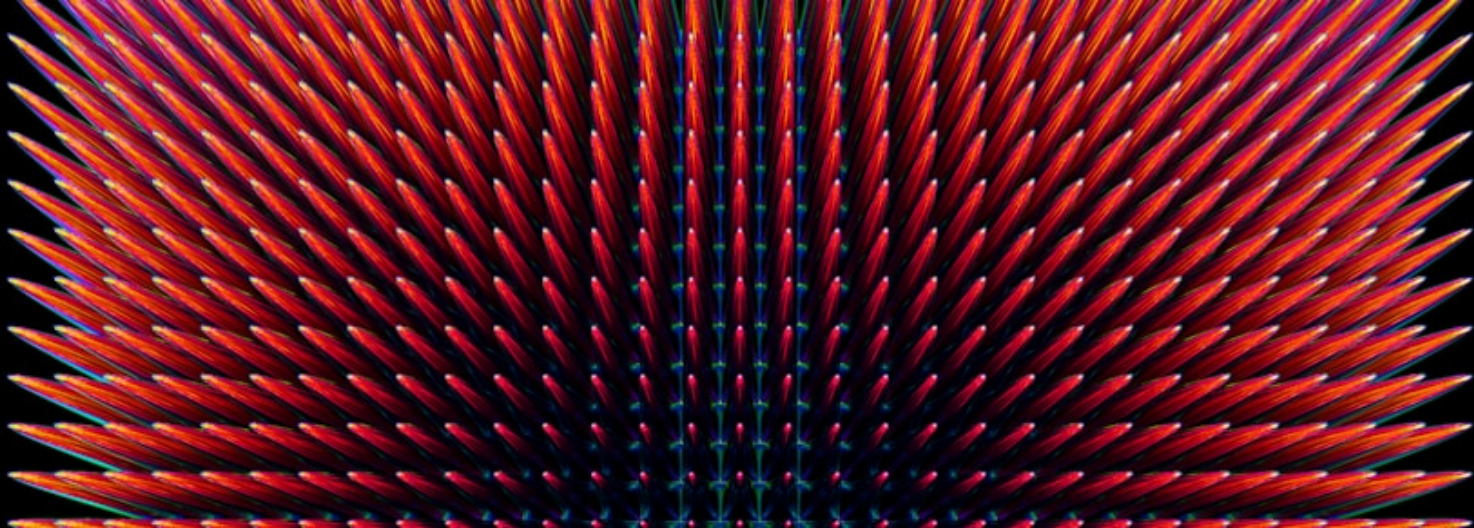
Current State

The PI value chain comprises a range of capabilities covering the healthcare financial transactions ecosystem. These capabilities include claims editing, clinical coding, coordination of benefits, data mining, eligibility, and benefits determination. They are generally divided into two main categories: prepayment capabilities, which aim to identify and fix billing or adjudication errors before a health plan makes payment to a care delivery organization, and post-payment capabilities, which identify and resolve historical payment errors after the initial payment has been made to the care delivery organization.

Additionally, traditional PI market solutions rely primarily on rules-based logic to effectively detect and prevent improper payments (**the good**). However, they are limited by their dependence on identifying only known patterns of improper payments (**the bad**), leaving them unable to uncover unknown anomalies (**the ugly**). By focusing on these “Known-Knowns,” traditional PI solutions fail to address the evolving and sophisticated techniques used by health systems that employ advanced AI for submitting claims, making them insufficient for entirely deterring fraudulent and abusive billing practices.

While legacy tools may suffice for addressing well-established issues in controlled, low-impact environments, they are inadequate for meeting the complex challenges faced by healthcare operators in the 21st century.

In contrast, advanced solutions, with their enhanced accuracy, speed, and depth of insights, have the potential to significantly boost effectiveness—improving affordability, optimizing clinical resources, and ensuring equitable access to care for all.



Our Solution: Leverage the Good, Remove the Bad and Remediate the Ugly

Generative AI (GenAI) is a branch of artificial intelligence that produces new data, patterns, or models based on existing data using deep learning, natural language processing (NLP), and computer vision. These models can understand and generate near real-life-like outputs based on given inputs. In cyber threat detection, these models have been trained on extensive data sets and have shown impressive capabilities to enhance cyber security capabilities. (3)

With Gen AI, we aim to tackle the weaknesses of current market offerings, both the known and unknown areas of detecting improper payments. Our experiences with DARPA Grand Challenges and other government-sponsored activities inform our solution.

We can uncover and address previously unseen PI knowledge gaps by leveraging synthetic claim simulations generated by payment integrity-specific large language models (Gen AI). Furthermore, our synthetic claim simulations can identify unknown vulnerabilities RCM vendors have yet to exploit. Also, to ensure the reasonableness of the simulations, a known limitation of Gen AI, we incorporate Cogitativo's expert knowledge base.

These models can understand and generate synthetic patient medical claims based on input from our clients and our knowledge base. The combination of machine learning and Gen AI has the potential to revolutionize numerous industries, particularly healthcare.

Impact of Gen AI on Payment Integrity

This new capability can significantly impact the value of payment integrity as the ability to swiftly review and consolidate diverse data sources is crucial. Even minor improvements in the accuracy and efficiency of claims adjudication can result in substantial financial benefits for various healthcare stakeholders, given the intricate and extensive nature of the US healthcare payments system.

The healthcare industry is at a pivotal juncture, presenting an opportunity for payors to leverage AI technology to proactively redefine the sector and unleash the potential to initiate the next phase of ensuring payment accuracy and compliance

Action

The healthcare industry is hyper-competitive, and businesses are constantly seeking innovative solutions from RCM vendors to increase their market share. With the arrival of AI advancements, payor organizations now have the opportunity to improve speed and visibility in addressing improper payments, whether known or unknown. Fortunately, you are not alone in this endeavor.

Cogitativo offers rapid deployment of AI capabilities to support your organization. We are committed to standing with you, providing tailored deployment, precise insights, and foresight to defend your organization with our AI capabilities.

Cogitativo - "making the unseen, seen"



References

- (1) <https://www.ache.org/-/media/ache/about-ache/corporate-partners/change-healthcare-ai-rcm-research-study-ebook.pdf>
- (2) <https://www.healthaffairs.org/content/briefs/role-clinical-waste-excess-us-health-spending#:~:text=Berwick%20and%20Hackbarth%20described%20failures,to%20sound%20science%20and%20>
- (3) <https://www.sciencedirect.com/science/article/pii/S2667345223000585>