



# AI in the Healthcare Revenue Cycle

## What sets apart companies effectively using AI from those that are not?

Despite considerable investment, generative AI tools in healthcare revenue management have yielded mixed results. While a vast majority of healthcare companies are investing in AI-driven solutions, only a fraction has achieved measurable business outcomes. Since GPTs launched widely two years ago, payers and providers have reported results from generative AI. Although some use cases have demonstrated success, large-scale impact remains elusive. Revenue management leaders continue to express skepticism and fatigue over the disparity between promises and actual results.

This disparity raises a critical question: What differentiates companies achieving significant benefits from AI from those that struggle to see returns? The answer lies not in the technology alone but in the approach—how organizations plan, implement, and integrate AI into their workflows.

### 1. AGILITY

AI development inherently involves uncertainty. Successful companies often start with small experiments, test various models, and use continuous feedback loops to refine their solutions. They view setbacks as learning opportunities and are prepared to pivot when evidence supports a new direction. Investments are made in tandem with evidence of effectiveness.

#### What we learned:

Our AI team opted to pivot away from using a chatbot to identify claims that matched a specific pattern to leveraging the same underlying technology for a more comprehensive agentic approach. This new method considers all auditor activity and notation on the platform as direct input to the system, modeling claims and assigning confidence scores based on relevant inputs continuously. This mechanism has been found to be more scalable than the previous chat interface, where users searched for claims by defining each scenario in natural language.

Traditional technology development methods use rigid structures and defined parameters, limiting flexibility and innovation in AI development. An adaptive, experimental approach enables incremental progress based on results and feedback. For example, companies with chat-style assistants face user fatigue from excessive clicking and typing but are reluctant to rethink these solutions.





# AI in the Healthcare Revenue Cycle

## 2. HUMAN-AI DYNAMICS

The most successful companies don't just ask, what can this tool do? They ask, when should it step in? They think of their AI solutions not as omnipotent entities but as collaborative partners, carefully considering the timing and nature of interactions between machine and human. If a powerful tool is brought in too early, it risks producing results that fall short of expectations; if it's introduced too late, it becomes a wasted effort. The key lies in finding that balance—deploying AI at the right moment to maximize its potential and create real value.

### What we learned:

Engaging our letter automation system just after it noted that the case has all the relevant documentation attached to it generated high-quality appeal letters in sync with the broader appeal workflow. Engaging it sooner proved unfruitful relative to the goal of automating appeal letter generation while invoking it after an analyst reviewed the case wasted time and resources because the model was capable of performing that analysis as part of the letter generation process.

Struggling companies often fail to consider how AI will fit into existing workflows or neglect to train staff on how to use AI effectively. Before implementing AI, thoroughly map the current workflows to understand where human intervention is required and where AI can add the most value. This ensures that AI solutions are introduced at logical points, minimizing disruption.

## 3. DATA QUALITY AND RELEVANCE

The success of AI solutions relies on high-quality, complete input data. Unlike traditional software that allows for human intervention, AI tools, especially large language models, are less tolerant of poor data. Successful companies invest in robust data infrastructure and incorporate specialized knowledge into the model execution process.

### What we learned:

To auto-generate appeal letters, the Trend Intelligent Agent comprehends the details of the encounter, the information contained in the claim, and the reason behind a denial. It then identifies and retrieves the relevant policy guidelines. The process is completed by analyzing the medical record. While the process is streamlined and requires no human intervention to perform any part of the analysis, humans are still needed to access data that is not easily available to the agent. The key is to identify tasks that may slow an AI agent down or prevent it from completing a task and prepare to address those tasks in advance, rather than disrupting the sequence of tasks and serially allocating them between humans and AI agents in a traditional workflow-centric fashion.

Companies often fail to achieve large-scale impact with AI due to poor data quality, incomplete datasets, and lack of system integration. Without clean, structured data and specialized knowledge, AI tools produce inaccurate predictions, ineffective automation, and unreliable outputs.





# AI in the Healthcare Revenue Cycle

## 4. SCALABILITY AND INTEGRATION

Successful companies approach AI projects with scalability in mind. They begin with small-scale implementations but plan for broader deployment across the entire revenue cycle, ensuring their AI systems can handle increasing volumes of data and complexity as they expand. They also ensure that their AI tools integrate seamlessly with other key healthcare systems like EHRs, billing platforms, and payer networks. Companies that develop independent AI tools for specific tasks may encounter inefficiencies and challenges in scalability. They might also face difficulties in scaling isolated solutions as the solution evolves.

### What we learned:

Trend Intelligent Agent's skills are not limited to one functional area or specific technology components. TIA's skills are interconnected, accessing the same data sets to perform different tasks. TIA's capabilities are integrated across Trend's payer and provider services to publish insights and learn from the actions and inputs of analysts, auditors, and clinical reviewers working to resolve financial inaccuracies across services and stakeholders. For example, the system's ability to take in payer policy in natural language from users and translate them into executable code to detect payment accuracy anomalies is closely connected to its ability to score payment accuracy anomalies identified through technical algorithms that exist in Trend's concept library. This approach enhances the effectiveness of each solution, allowing one part of the solution to benefit from enhancements made to another part.

## THE DIFFERENTIATOR: A STRATEGIC APPROACH

Companies that define specific business objectives, such as reducing claim denials, optimizing payment collection rates, or improving transparency in patient billing have a greater likelihood of achieving substantial impact than those that pursue AI solutions solely for the sake of appearing innovative. By establishing measurable goals and clear ROI metrics, such as fewer claim denials and faster payments, they strategically address significant issues. These companies track key performance indicators (KPIs) and keep stakeholders informed on the success of AI initiatives.

Conversely, companies struggling with AI adoption often embark on large-scale implementations without a clear strategy. They adopt AI primarily to remain competitive but lack a defined plan for how AI will enhance their revenue management processes or deliver tangible ROI. Without specific goals or an understanding of how AI aligns with their strategy, these efforts can fall short, resulting in inefficiencies and missed opportunities for improvement.

There is no doubt that generative AI has significant potential in healthcare revenue management for both payers and providers. However, realizing this potential requires more than just technology—it necessitates a strategic approach encompassing agility, high-quality data, human-AI collaboration, and clear objectives.

Successful companies that leverage AI effectively are comfortable with uncertainty, prioritize iterative learning, invest in data infrastructure, and focus on measurable outcomes. The challenge lies not only in adopting AI but also in rethinking traditional approaches to solution development and integration. By prioritizing adaptability, investing in data infrastructure, and aligning AI with strategic goals, organizations can fully utilize these tools to improve revenue management.

