Denials Management

Battle of the bots: As payers use AI to drive denials higher, providers fight back

As denial rates climb to record highs, driven in part by AI-powered robots, health systems are starting to stand their ground.
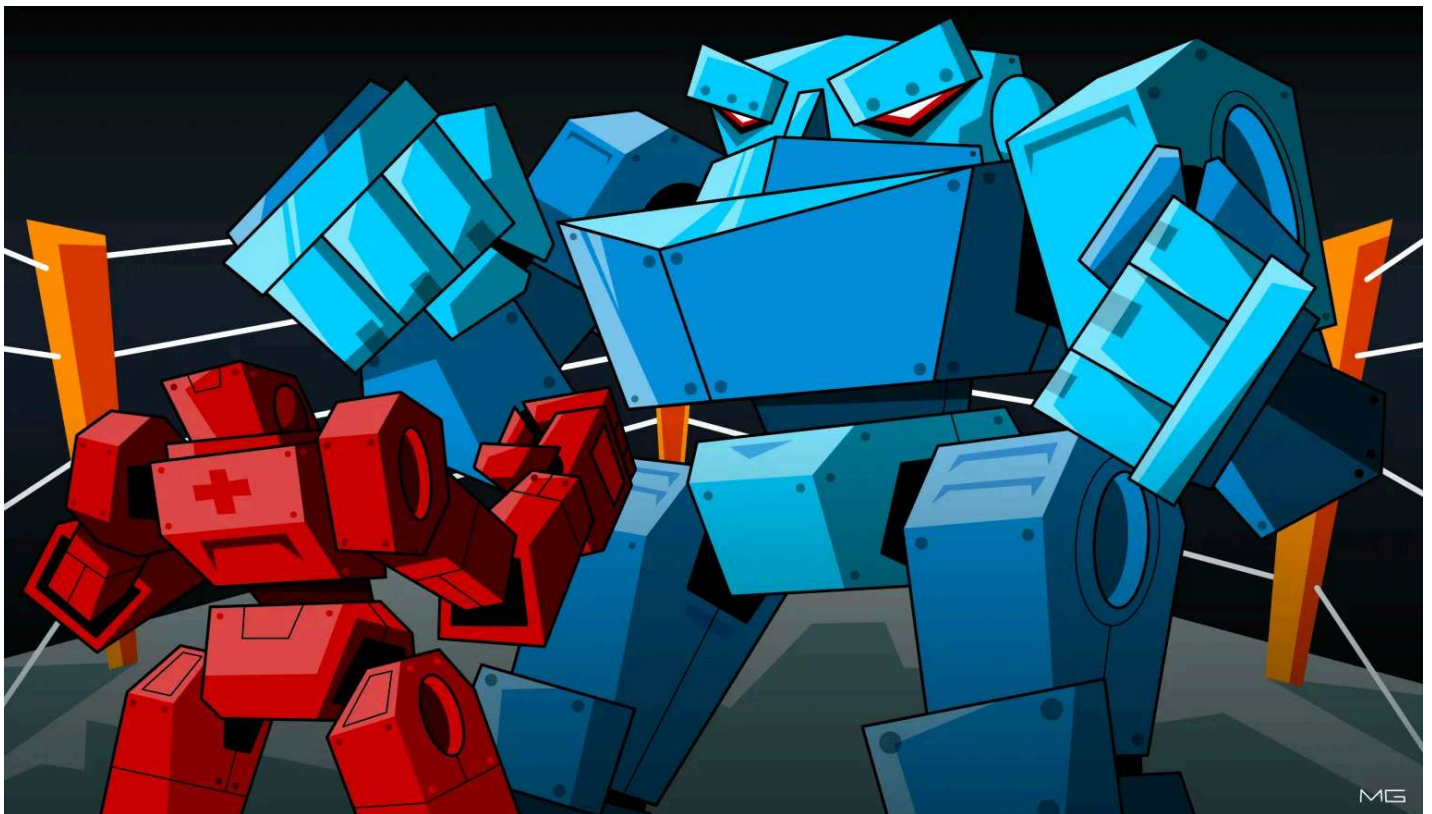
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T wo fighters face each other in the ring, circling together, assuming there will be a single victor.

One, representing the U.S. health insurance industry, has made huge investments in aggressive technology over the past several years to automate claim processing and reviews, making it hard for the other fighter — representing the nation's healthcare providers — to keep up.[a] Unlike their health insurance counterparts, U.S. hospitals and health systems have spent much of the past 10 years trying to meet government requirements for electronic health records (EHRs), while also struggling with the cost, implementation and risks of deploying AI to stay in the fight.

Ashraf Shehata, principal and U.S. sector leader for healthcare at KPMG, likens this technological battle to a game of Rock 'Em Sock 'Em Robots in which both payers and providers lean into AI for claims management, with providers, up to this point, more likely to get their block knocked off.

The question now for the fighters in this metaphorical scenario: Can either win in the long term?

"We're essentially arming both sides of the house," said Shehata.

Noting that both providers and payers are becoming more proficient in their use of AI, Shehata asked: "Are we going to be at a zero sum, where we're going to see both robots lying on the floor, with both parties having spent a lot of money? Or are we going to go beyond the 'Battle of the Bots' toward a better spirit of collaboration?"

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AI spurring change

Nearly two-thirds of healthcare organizations plan to increase spending on AI in the next three years, and 42% say AI-driven revenue cycle management is a top area of focus, a recent survey found.[b] That's due to the big investments health plans have made in AI. Private payers could save roughly 7% to 9% of their total costs, amounting to $80 billion to $110 billion in annual savings, within the next five years.

But this was never a fair fight, said healthcare revenue cycle leader Sheldon Pink, FHFMA, MBA, former vice president of revenue cycle, Luminis Health, Annapolis, Md.

"We've been invaded," Pink said. "Payers have been using this technology for years to fight against hospitals and increase our denials. Now, healthcare systems are getting smarter."

Sheldon Pink said true AI offers the means for looking at past activities and using the data to predict what will happen in the future.

And while Shehata said his discussions with payers indicate a desire to come together with providers around value-based agreements, he also thinks there may be no way to avoid conflict.

"I think everybody's still kind of taking their positions — and that's essentially where the robots falter," he said.

Now, healthcare providers must determine how to respond to an AI-powered assault on revenue — and whether they have the resources and expertise to get into the ring with an AI-based approach of their own.

Knocked down, but not out

Denials data show why there is a battle for revenue taking place in healthcare. Initial denial rates as a percentage of claim value jumped from 10.15% in 2020 to 11.99% by the end of Q3 2023, a recent benchmarking analysis shows.[c] And they are even higher for inpatient care: 14.07% through Q3 2023, according to the analysis.

Payers not only are denying a larger volume of claims — with prior authorization, requests for information and medical necessity denials trending upward — but also are taking longer to pay. Kodiak Solutions notes that aged accounts receivables (A/R) are "growing at an alarming rate." Among commercial claims, aged A/R greater than 90 days reached 36% in mid-2023 — up from 27% in 2020 and 32% in 2021 — and remained there through Q3 2023.

"Clearly, the leading driver of aged A/R more than 90 days is related to increases in initially denied claims, which require additional time and resources from hospitals, health systems and medical practices to resolve," the Kodiak analysis states.

For hospitals and health systems, the impact of rising initial denial rates runs deep. According to an American Hospital Association report, 35% of hospitals and health systems reported $50 million or more in lost revenue due to denied claims.[d]

Amid reports that some Medicare Advantage (MA) patients were unfairly denied coverage based on payers' use of AI, the U.S. House of Representatives has urged CMS to evaluate how MA plans are using AI and algorithms to make coverage determinations.[e]

In a letter to the White House Office of Science and Technology Policy last summer, a representative for America's Health Insurance Plans (AHIP) pointed to the value health plans have found in AI, including improved consumer experience, expedited claims processes and fraud detection.[f] The letter also said AHIP members are committed to ensuring health plans' use of AI is "safe, transparent, explainable and ethical."

No slowdown in sight

But as the sophistication of AI algorithms used by health plans to speed claims processes increases, the resulting jump in denials has fostered an "us versus them" mentality between providers and payers.

"There has been a substantial increase in activity on the payer side to create obstacles for payment, and the pain is being felt on the provider side through the 'triple-D effect': downgrades, delays and denials," said Amy Assenmacher, RN, FHFMA, CRCR, senior vice president, revenue cycle, Corewell Health, Grand Rapids, Mich.

Denials have always been an issue for providers. Yet many feel the problem is getting worse.

"[Denials have] become more difficult to manage over the past two years because more claims are being denied and payers are taking longer to respond," said Krysten Blanchette, vice president of revenue cycle, Care New England, Providence, R.I.

"We used to get an initial decision between 14 and 30 days," Blanchette said.
"Now, I would say it's probably between 14 to 60 days. So for an extra 30 days, you don't even know what's going on with payment for some of your claims."

Providers' various AI responses

It's no surprise, then, that healthcare providers have begun to invest in AI-powered solutions to get a better view into where denials originate and their root causes. Such insight then informs conversations with payers.

That said, Pink questioned calling most providers' approach *true AI*.

"True AI would tell me what we did in the past and use that data to predict what's going to happen in the future, saying for example, 'Hey, you're going to start receiving denials for X,'" Pink said. "The reality is, we're not there yet as an industry."

Luminis Health's approach. Luminis Health has incorporated robotic process automation and machine learning to help ensure claims are as clean as possible and for work queue management.

Pink said that while he was there, he and his team were able to reduce some items in the health system's work queue by almost 15% to 20% by using bots to respond to requests, from both payers and internal sources.

Mayo Clinic's approach. Mayo Clinic's Nikki Harper, CHFP, CRCE, division chair, revenue cycle reporting, analytics and automation, said the Rochester, Minn.-based health system has been able to cut, through attrition, about 30 FTE positions over the past two years and to save $700,000 in vendor costs through the use of AI bots in the revenue cycle. The revenue cycle department's other KPIs have improved as well.

Harper's revenue cycle team has built bots for multiple tasks, including claims statusing, auto-closing duplicate denials, redacting documents sent out and prior authorization statusing.

"We're able to work everything more quickly," she said. "We actually have bots that perform our claims and prior authorization statusing, going out to websites to status the claim or prior authorization request and bring that information back into Epic. This reduces our manual administrative burden and allows our employees to work on other priorities instead of having to manually follow up on the status of these unresolved items."

Nikki Harper of Mayo Clinic said her organization has a bot that writes appeal letters.

Mayo takes a unique approach in having a payer liaison team to address the issues the revenue cycle team is seeing.

"We use the analytics to create a payer scorecard and present it to the health plans once a month: 'Here's the number of denials we're seeing compared to what we've billed; here's how quickly you pay claims' — just a whole suite of information," Harper said. "We talk about the areas where we're experiencing the highest administrative burden, whether it's around medical necessity, an increase in denials for prior authorization or a denial for a procedure that didn't require an authorization. Then we walk through how we can do things differently — for instance, whether there's a new form that was created that we didn't know about or whether a new rule can be put in place to help avoid a particular issue."

The payer-to-provider conversations have proven fruitful, Harper said, noting that payers often respond

positively because they also do not want the administrative burden.

Care New England's approach. Care New England achieved a 55% reduction in authorization-related denials by incorporating bots to assist with payer notifications when patients are admitted to the hospital, a process that is highly payer-specific.

"We've been able to utilize AI for this task because it's just an information submission; there's no decision-making or clinical review involved," Blanchette said. "Secure notification happens within the 24-hour window to avoid a denial, and staff only review the more complex cases that might require a phone call."

Care New England worked with a vendor to develop its approach to automating prior authorization workflows two years ago. Within one year, the health system recorded an 83% clean submission rate for prior authorizations and reduced authorization turnaround times by 80%. It also decreased time spent on prior authorizations by 2,841 hours and saved $644,000 in avoided write-offs and expense.

"The message to our team has always been that we use AI to supplement our work because we can't do it all," Blanchette said.

Corewell Health's approach. Corewell Health's Assenmacher said the health system is making steady progress along the AI maturation journey, having already invested in a robust and rigorous AI governance structure and framework. Its revenue cycle team is piloting Copilot for Microsoft 365 to increase efficiency in administrative functions.

Corewell Health also leverages an RPA tool that supports authorization, registration, credentialing and billing workflows, with $2.5 million in savings through redirected labor in 2023. Over time, the team plans to add generative AI functionality for predictive denials management and proactive appeals.

Assenmacher believes the steps Corewell is taking toward more broadly adopting AI will put its revenue cycle team on more equal footing with payers.

"I think it's going to be a game changer," she said.

Footnotes

a. Accenture, ["U.S. insurers could boost profits by $20 billion through intelligent solutions, according to Accenture Report,"](#) news release, July 25, 2018.

b. Healthcare IT Leaders, [*The state of artificial intelligence (AI) adoption in healthcare*](#), 2023.

c. Kodiak Solutions, [*The healthcare waiting games*](#), Kodiak RCA benchmarking analysis, December 2023.

d. American Hospital Association, [*Addressing commercial health plan challenges to ensure fair coverage for patients and providers*](#), November 2022.

e. Congress of the United States, [Letter to CMS Administrator Chiquita Brooks-LaSure](#), Nov. 3, 2023.

f. Lloyd, D.A., "RE: Request for Information (RFI) Response: National Priorities for Artificial Intelligence (OSTP‑TECH‑2023‑0007‑0001) — AHIP Comments,"   AHIP letter, July 7, 2023.

How to build the right AI offense

As providers explore and refine AI capabilities, the power of analysis unleashed on both provider and payer sides will likely have a transformational impact on care and service delivery, said Ashraf Shehata, principal and U.S. sector leader for healthcare at KPMG.

Krysten Blanchette of Care New England said increasing denials by payers are making claims more difficult to manage than in the past.

Early movers in this space offered key considerations for other health systems in embarking on an AI journey in the revenue cycle.

Think carefully about how to introduce AI to your revenue cycle team. "The biggest lesson I've learned is to really be intentional in how you communicate internally with your teams," said Nikki Harper, division chair, revenue cycle reporting, analytics and automation for Mayo Clinic. "It's important to get them excited about automation and the possibilities and ask what things they spend time on that they would love not to have to do every day. It's important to communicate that the automation is allowing us to have our talented team focus on the high-priority items with their knowledge and skill set. It takes the repetitive tasks and automates them to improve employee engagement."

Be transparent with payers about your approach. "This will help you start a candid dialogue with payers to build more of a partnership and collaborative approach around opportunity areas and how to address them," said Amy Assenmacher, RN, FHFMA, CRCR, senior vice president, revenue cycle, Corewell Health.

Reinvest ROI from AI back into AI. "It can be a hard sell because organizations can see it as another added cost," Harper said. "By showing the value of automation and reinvesting in AI to strengthen your approach, you can move from the easy things, like bots, toward natural language processing and machine learning, which can further drive value."

Establish guardrails for the use of AI in revenue cycle. "It's important that we take advantage of these tools in a responsible way, with clearly defined policies and procedures," said Assenmacher.

Don't be afraid to lean into outside AI expertise. "We're not in an environment where you can push a couple of buttons and send a claim out the door," said Krysten Blanchette, vice president of revenue cycle, Care New England. "You need a certain level of AI expertise to be able to function in a world where payers are denying claims more often."

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