TechTarget | xtelligent healthcare

Revenue Cycle Management with Automation and AI

In this ebook

In this ebook:

Providers are enthusiastic about adopting automated technology in revenue cycle management, as CFOs prioritize profitability increases and invest in revenue cycle management and tech. Mount Sinai, for example, is already utilizing autonomous medical coding technology for about half of their pathology cases, with plans to expand its usage in the near future.

In this ebook

Top Trends in Automation, AI Adoption in Revenue Cycle

Jacqueline LaPointe, Executive Editor

Providers are energetic about automated technology in revenue cycle management, but it is not full steam ahead with adoption quite yet.

Automation has a lot of potential to streamline revenue cycle management, and healthcare organizations are certainly interested in adopting technology to achieve efficiency. However, that interest is not necessarily turning into investment as provider organizations seek answers to critical questions.

“Today, we are seeing mixed signals,” Jaren Day, insights director at KLAS Research, recently told *RevCycleIntelligence*. “Adoption will probably get better in the future, but right now, people are waiting to see if they can get the ROI before jumping in.”

Leaders at provider organizations are also wondering about implementation and maintenance costs, reliance on technology for revenue cycle management, and various other considerations that come with adopting automated solutions, explained Day and his colleague Kyle Chilton, senior insights director and produce line owner at KLAS.

In this ebook

Still, the energy around the adoption of automation and AI for revenue cycle management is high. It's just a matter of finding the technology that works for an organization and their budget.

Where is the buzz?

Revenue cycle is still primarily comprised of manual processes, making the area ripe for technology adoption. But provider leaders seem to be focusing on some particular areas for automation adoption.

"KLAS has seen a lot of energy from providers in looking at automating spaces within claims management, specifically," Day stated. "Within that area, you have claims status, denials, coding, and more, so providers are looking at autonomous coding, automating the patient estimate, and prior authorization technology."

Prior authorizations, cost estimates, and other parts of claims management are major pain points within provider organizations. Automation can take some of the more repetitive and mundane tasks within claims management to free up qualified professionals to handle more complex responsibilities across the revenue cycle. For example, automated solutions can quickly check a claim's status without much human intervention. In contrast, a manual process

In this ebook

necessitates a staff member to call a payer or verify through a payer's specific portal.

Providers are prioritizing operational optimization when it comes to technology investments within the revenue cycle, Chilton underscored. Where is the most administrative burden for revenue cycle leaders? That's where automation will likely come to fruition within healthcare.

There is also an increased focus on automating these specific use cases over the last couple of years because of the loss of expertise due to turnover and other workforce challenges from the pandemic, Day added.

A **survey** from last year shows that most revenue cycle executives — 80 percent — said turnover in their department ranged from 11 to 40 percent while the national average at the time was 3.8 percent. An overwhelming majority of the executives also indicated a lack of qualified workers had a detrimental impact on organizational revenue channels.

"In the past, a revenue cycle leader may have solved a problem around claims or denials internally with the expertise they had in their own department, whereas now the expertise is getting diluted," Day stated. "So, there is more of a reliance on, one, automation to help with the churn, and two, vendors to help with the expertise."

"That expertise is still needed," Day emphasized. "But turnover adds fuel to the fire."

In this ebook

AI enters the revenue cycle chat

Any person interested in adopting technology in 2024 will encounter the term AI. AI is seemingly influencing everything from how we shop to **how we brush our teeth**. Healthcare is not different; AI has the potential to disrupt overly complex operations to streamline processes and return accurate results, something revenue cycle leaders are very interested in.

The explosion of **ChatGPT** has spurred energy around AI, according to Day and Chilton. The popularity of the generative AI chatbot and other AI technologies in healthcare has created a buzz, prompting providers to think of how AI can make day-to-day tasks easier. One major area of interest related to the revenue cycle is clinical documentation.

“Documentation won't go away, but AI will make it a lot easier and more efficient to hopefully reduce burnout for clinicians and then improve coding and other areas that rely on good documentation,” Chilton said. “So, there's a lot of energy there for sure.”

But AI adoption in the revenue cycle or healthcare is generally not full steam ahead.

In this ebook

Use cases for newer AI-enabled technology, like solutions leveraging generative AI, are simply lacking. There is a lot of optimism around what **generative AI can do for the revenue cycle** — writing letters for prior authorizations, medical appeals, and deals, as well as some post-procedural instructions for patients — but the real-time use cases are still being built.

“Overall, enthusiasm for AI is growing, but some people are still skeptical,” Day said. “Mainly, it depends on whether or not they have an established AI strategy or what type of organization you're talking to.”

A large health system, for example, may have a team of data scientists and the budget to adopt AI-enabled technologies and innovate within the revenue cycle. Meanwhile, a smaller, freestanding hospital in a rural area is likely trying to catch up with its digital transformation. After all, technology requires budget and people to monitor and train the AI, whether the provider organization or a vendor employs those people.

In this ebook

The barriers to automation, AI adoption

Provider organizations need the budget for technology investments, making cost the number one barrier to adopting automation and AI in the revenue cycle. But there are also internal cultural barriers, including concerns about overreliance on technology and gaps in in-house skills. So, providers not only need the money to implement and maintain technologies but also the human power to make them effective.

“There are similar challenges with your IT team's bandwidth,” Day explained. “Where does this technology investment fall on the priority list for the hospital based on what's happening with the IT team and what they're currently deploying? For example, if you're deploying an EMR, anything else will take a backseat because all of your technical expertise is being deployed in that EMR implementation. IT resources and staffing are important.”

Providers will have to consider the cost of deploying automation compared to building a solution themselves. Where is the balance, Day asked, and when does the technology become cheaper than the current solution that is in place?

Making the business case for technology investments can also be challenging when ROI is difficult to determine, an issue especially prevalent with **revenue cycle technology**.

In this ebook

“One of the reasons why it's difficult to determine the ROI is because some of these things aren't necessarily tangible,” Day stated. “You may not be replacing man-hours, but you're getting into different areas of revenue leakage because the man-hours that you replaced through automation are now focused on challenges that you couldn't get to because you didn't have the resources to get to them. It’s like operating at 50 percent before implementing automation, then going to 75 percent because more resources focus on more complex areas.”

A lot of the responsibility will fall on vendors to demonstrate the benefits of their technologies to providers, whether in traditional dollar amounts or increased capacity.

“There's a lot of energy, obviously, so it's going to be interesting to see in the next few years which vendors rise to the top and can prove that ROI or where consolidation happens because that always happens when there are new solutions,” Chilton stated.

“It's an exciting part of healthcare right now just to see how the technology can make a difference because I think this is one area that’s a little bit easier to justify using AI and other technologies, whereas there’s extra caution on the clinical side.”

➢ **Next article**

In this ebook

Revenue Cycle Management, AI Take Center Stage in 2024

Jacqueline LaPointe, Executive Editor

As CFOs expect profitability increases, revenue cycle management and tech investments become top priorities.

Healthcare CFOs are optimistic about the financial outlook this year as their organizations put revenue cycle management, dealmaking, and technology investments on the top of their priority lists.

The "**2024 Healthcare CFO Outlook Survey**" conducted by BDO surveyed 100 CFOs from organizations with revenues between $250 million to $3 billion at the end of last year. The recently released results showed that 79 percent expect a revenue increase this year. CFOs also cited profitability as an area of improvement, with 78 percent expecting the metric to increase.

BDO said the healthcare financial leaders may have some misplaced optimism about 2024's financial outlook. Regulatory pressures, clawbacks of COVID-19 funding, and challenging bond and loan covenant agreements may make it difficult for healthcare organizations to achieve higher revenue and profitability in 2024, according to the survey.

Dig deeper

- **How to Adapt as Healthcare Workforce Management Shifts**
- **How AI is Becoming a Staple in Medical Coding, Auditing**
- **Key Considerations For Choosing a Revenue Cycle Technology Vendor**

About 11 percent of CFOs said their organizations have violated their bond and/or loan covenants in the past year and are concerned they will violate them again. Meanwhile, 30 percent said their organizations had not violated any covenants but are concerned they will over the next year.

Additionally, the survey found that only 35 percent of healthcare organizations represented had more than 60 days cash on hand. Forty-four percent of CFOs said they have to have more strategic conversations around economic resilience.

The survey indicated a shift in strategy this year. About 39 percent of CFOs said they are adjusting **revenue cycle management** to improve liquidity, while 37 percent are engaging in strategic cost reductions, including staff. Approximately a third (34 percent) said they are transforming operating models.

“The healthcare industry is still in recovery mode in many ways, and CFOs are revisiting strategy and investment in a proactive approach to support resiliency in their operations,” Brad Boyd, national co-leader of the BDO Center for

In this ebook

Healthcare Excellence & Innovation, said in the survey. “Their clear focus on cash flow, cost optimization, and risk management will be critical to prevent disruption of care to their patient communities.”

Optimizing revenue cycles through roles and workflows, denials and post-payment audits, and AI and robotic process automation will also increase efficiency, according to the survey.

New advancements in AI, such as **generative AI**, have healthcare finance leaders excited. Nearly half of CFOs surveyed this year (47 percent) expect to increase technology implementation spending this year. Almost all (98 percent) also said they are piloting generative AI, while 46 percent are building a proprietary generative AI platform.

These technology investments are focused on front- and back-office improvements, the survey said. Forty-five percent of respondents reported increasing digital investments in patient-provider communications, and 44 percent said greater investments are going to remote patient care. Use cases for generative AI included treatment plan generation, clinician-to-patient communications, and diagnostics and medical imaging.

Other technology investments are focusing on predictive staffing, financial reporting software, and enterprise data analytics.

Finally, almost three-quarters of CFOs have dealmaking on their to-do lists in 2024. However, navigating due diligence (cited by 23 percent of healthcare

CFOs), finding the right target or buyer (20 percent), and valuation gaps (18 percent) were the top challenges facing healthcare finance leaders this year.

➢ **Next article**

In this ebook

From Pilot to Scale, Mount Sinai Leverages Autonomous Medical Coding

Author's name, Executive Editor

Mount Sinai uses autonomous medical coding technology to code about half of pathology cases, with plans to increase volume and scale soon.

An experiment to streamline medical coding is set to take off at Mount Sinai Health System.

The academic medical system nestled in the New York metropolitan area recently implemented autonomous medical coding within its pathology department to streamline coding and bring efficiencies to care delivery. Now, the technology codes about half of the system's pathology cases, with expectations that AI-enabled coding can do more for the system.

"There's hope we reach about 70 percent of our pathology volume in the next year," David S. Mendelson, MD, Mount Sinai's vice chair for radiology information technology and associate CMIO for the Mount Sinai doctor's faculty practice, recently told *RevCycleIntelligence*. "And we do believe there are other opportunities. We are exploring autonomous coding for a variety of specialties."

In this ebook

Autonomous medical coding is at the top of many **healthcare provider wish lists** this year, as organizations look to automation and other technologies, like AI, to make the administration of healthcare less complex. Medical coding is, after all, one of the most labor-intensive aspects of the healthcare revenue cycle.

Provider organizations need coding to be precise and accurate to not only paint a complete picture of patient encounters but also to generate revenue and reduce denials and other payment delays. Organizations rely on their staff's expertise to search medical records to capture the correct codes for claims management, data analytics, and more.

Autonomous medical coding may be able to help, especially as providers face a **shortage of medical coders**. The technology leverages AI to assign medical codes automatically.

"There are a couple of venues where AI has rapidly been used in healthcare," Mendelson explained. "One venue we see is workflow. We're really beginning to see, in a variety of ways, that AI can take over relatively mundane, repetitive areas in healthcare operations. And it's not that those areas don't require expertise, but AI and machine learning can be trained to have that expertise."

"It stood out a couple of years ago that coding was one of those areas," Mendelson continued. "There are tasks here that are repetitive and basically work off of well-understood ways of coding things."

In this ebook

This got the radiologist, by practice, asking why AI couldn't look at the clinical documentation to help generate the codes staff would have to pick through and select. Could AI and machine learning be trained to do the same thing?

"The truth of the matter is, if they can accurately do this, they'll do it much faster than human coders will," Mendelson said.

With the support of the CFO and prior experience with a vendor, Mount Sinai decided to pilot autonomous medical coding in pathology with CodaMetrix. The medical system went live in January 2022 with an initial coding rate between 15 and 20 percent of pathology cases. Working out some kinks, that rate quickly increased.

"Interestingly, implementation is very dependent on the way the existing lab system provides the information to the coding vendor," Mendelson explained. "There are a lot of different lab systems out there, and they export billing data and coding reports in different ways. There's a level of work that the coding vendor has to do to configure themselves to receive the data so it's in a form that they can then code accurately. There's a lot of background work."

This is a factor providers need to anticipate when implementing autonomous medical coding technology, Mendelson warned. In addition to the pathologist's report, ancillary information must be considered to code and bill for the service accurately.

In this ebook

Mount Sinai's coding and billing supervisors also worked closely with the vendor to identify why some cases could be coded using AI and others could not.

Implementing autonomous coding technology successfully relies on the humans who have always done the work. AI algorithms must be trained to produce accurate, complete results, and autonomous medical coding is no different. Some patient cases are complex and require human expertise to break down what happened in the language of medical codes.

"CodaMetrix sends back reports to us with the codes, or it sends back a report of what it knows it can't code, so the human coders then attack those and code them manually," Mendelson said.

Identifying gaps in what the technology can and cannot do is part of the implementation process, but these bumps in the road have not dampened Mount Sinai's appetite for AI in medical coding. The system moved beyond the pilot and continued their partnership to optimize pathology coding further and eventually more.

"There's no doubt in my mind this will be a staple in healthcare within the next few years," Mendelson stated. "Let's face it, the reality is everybody's facing economic challenges in healthcare right now. You see hospitals closing, and there are a lot of mergers going on."

Healthcare organizations are seeking ways to minimize costs while streamlining the delivery of care. **Financial performance for major health systems** to

In this ebook

small physician practices has been spotty over the last year as providers grapple with economic headwinds, rising expenses, and stabilizing patient volumes. Many have turned to technology like autonomous medical coding to address staffing shortages and other inefficiencies costing their organizations money.

“You want patients to get high-quality services, and you want them to get appropriate services as rapidly as they can. So, AI is going to influence that,” Mendelson underscored. “In terms of managing the operation and the revenue coming in, AI seems to be a natural fit.”

These conditions are giving rise to a booming autonomous medical coding market, which will likely mirror what has happened with vendors in the radiology technology market, AI’s other top area of focus.

“There are a lot of startups because this kind of AI seems to be the low-hanging fruit in healthcare, at least right now,” Mendelson explained. “There are going to be some companies that rise above the others and do code accurately.”

Providers will have many choices when it comes to implementing autonomous medical coding. However, they will need to find the right fit for their organization, department, and specific workflows. Data collection and sharing obstacles, market volatility, and change management will need to be considered as providers continue down the path to AI-enabled medical coding.

In this ebook

One aspect Mendelson encouraged leaders to consider is their workforce. AI technology can reduce headcount for organizations, but leaders should think of what their workforce can do alongside AI-enabled workflows. Certain job functions may disappear with the rise of this technology, but other functions will emerge for humans to do.

“Realistically, in the next few years, you're going to see AI and machine learning algorithms doing autonomous coding throughout most of healthcare,” Mendelson said. “There will probably be a remaining role for human coders, for encounters that are a little more complex, a little more nuanced. Those will still require a level of expertise because they're just more complex. But I think the majority of coding is going to be taken over.”

In this ebook

Getting more Xtelligent exclusive content

As an Xtelligent member, you have access to TechTarget's entire portfolio of 80+ websites. Xtelligent access directs you to previously unavailable "platinum members-only resources" that are guaranteed to save you the time and effort of having to track such premium content down on your own, ultimately helping you to solve your toughest IT challenges more effectively—and faster—than ever before.

Take full advantage of your membership by visiting https://www.techtarget.com/xtelligent

Images: Adobe Stock