



WHITE PAPER

Revenue Cycle Management: Connecting Technology, People, and Processes

Summary

Administrative costs account for up to 25% of U.S. health expenditures with billing and coding being two of the top drivers of these expenses, according to reports cited in *JAMA*.¹ Chronic medical coding challenges and revenue cycle management staffing shortages have healthcare organizations struggling to find ways to contain costs, while also ensuring coding accuracy and continuous compliance. New technologies, such as autonomous coding, have emerged to solve the challenges associated with manual coding and billing workflows and help enhance operational efficiencies.

With this in mind, the American Health Information Management Association (AHIMA) and Nym convened an expert panel of health information and revenue cycle management (RCM) experts to explore the implications of revenue cycle automation. The panel discussed how organizations can build the case for revenue cycle automation, assessing the impact on clinical and non-clinical workflows, as well as future use-cases.

Expert Panel

MODERATOR

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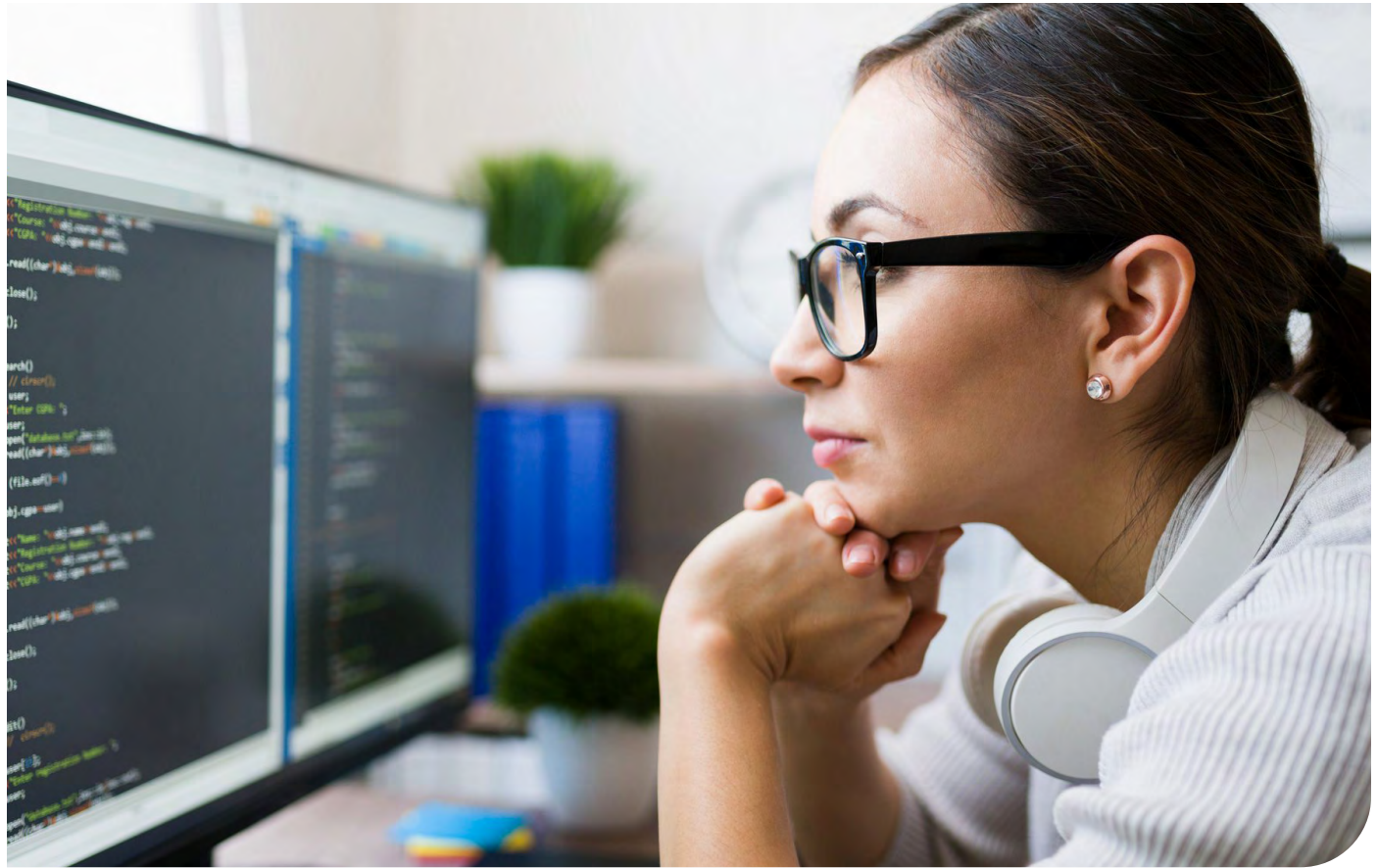
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¹Chernew, M, Mintz, H. Administrative Expenses in the US Health Care System: Why So High? *JAMA*. 2021;326(17): 1679-1680.



Overcoming Roadblocks to RCM Productivity

The ongoing revenue cycle staffing shortage shows no signs of ending soon, with over 48% of RCM executives reporting a “severe shortage” in their departments.² This is causing significant challenges for healthcare organizations; there’s simply not enough RCM staff to meet the increasing workflow demand. Additionally, payers have turned to automation for claims processing and denials management, resulting in a higher volume of denials, pressuring revenue cycle departments to direct more resources towards appeals. Pre-authorizations, medical necessity, and claims edits are other factors contributing to the high revenue cycle workloads, along with an increase in hospitalizations and case complexity.

Healthcare organizations have been forced to push overtime on already stretched staff or outsource to third party contractors to manage the higher work volume. The workforce pressures, however, are **driving innovations that promise to enhance the reliability, accuracy, and efficiency of the revenue cycle**. According to the panel, many of the tasks relegated to revenue cycle staff are primed for automation. In fact, 75% of health systems report that they currently use, or are in the process of implementing RCM automation software.³ Adopting automation will free up time for RCM staff to focus on more complex cases and improve the quality and productivity of medical coding and billing and overall revenue cycle performance.

² Adams, Katie. “Nearly Half of Providers Are behind on Revenue Goals amid RCM Department Labor Shortages, Report Shows.” MedCity News, 1 July 2022, <https://medcitynews.com/2022/07/nearly-half-of-providers-are-behind-on-revenue-goals-amid-rcm-department-labor-shortages-report-shows/>.

³ Akasa. “Automation in Healthcare Revenue Cycle Operations Jumps from 66% to 78% in Less than a Year.” Automation in Healthcare Revenue Cycle Operations Jumps from 66% to 78% in Less Than a Year, 19 Aug. 2021, <https://www.prnewswire.com/news-releases/automation-in-healthcare-revenue-cycle-operations-jumps-from-66-to-78-in-less-than-a-year-301358140.html>.

“We have the data and the information, so automation really can help us go deeper and drive a positive ROI and to best use our resources.”

—DIANN SMITH, TEXAS HEALTH RESOURCES

Autonomous coding provides a fully automated solution to provider organizations, accurately coding charts within seconds and submitting them for billing without human intervention. Current use cases are focused on outpatient services, as outpatient medical records are significantly shorter in length than inpatient medical records. Leveraging AI, autonomous coding moves beyond computer assisted coding (CAC) that pre-codes charts and requires validation from a professional coder. Autonomous coding solutions decipher physician notes within medical records and then instantly assign compliant medical codes for claims submission. Autonomous coding solutions can accurately assign diagnostic and procedure codes to charts with 96% code over code accuracy for the majority of outpatient specialties.

The Case for Revenue Cycle Automation

The case for revenue cycle automation is strong, yet skepticism over adoption remains. According to the panel, some skepticism is attributed to previous technological adoptions that failed to live up to expectations. While CAC and encoding are useful and have enhanced efficiencies, they are limited in scope and both technologies are still heavily reliant upon human intervention to validate documentation accuracy.

Budget constraints and staffing shortages are top considerations for revenue cycle automation. Autonomous coding can help organizations address these pressures and free up coding staff to work on more complex cases. Coders will be able to work at the top of their skill level, no longer spending time performing repetitive, manual tasks. Revenue cycle leaders should conduct a coding productivity assessment to determine how much time coders are spending on average per case, particularly how much time is spent on data entry, charge capture, and other tasks that can be easily automated.

For revenue cycle leaders trying to make the case for automation, the expedited time-to-code and coding accuracy are big drivers for adoption. Manual coding for simple claims can take days—even weeks—as coders work through incomplete records, resulting in a backlog of cases. Autonomous coding can code records within seconds and submit claims within a day,

resulting in improvements in accounts receivable days and reductions in denials and cases of discharged not final billed.

With manual coding, accuracy can fluctuate over time as a result of increased chart volumes and coder fatigue, leading to increased denials, missed revenue, and additional work for the RCM department as a whole. In contrast, autonomous coding maintains at least 96% coding accuracy over time regardless of the volume. This ultimately helps RCM departments reduce denials and ensure that no revenue is lost.

It's important for organizations to stress the **technology will support coders in their roles and not replace them**, the panel notes. Human intervention will still be necessary to handle complex cases and for CDI. While the technology won't replace coders, it can address the workforce challenges many organizations face. By removing repetitive, simple tasks from the revenue cycle workload, organizations can enhance staff productivity and reduce the need to hire and train additional coders. The risks of automation are minimal, the panel states, as the level of coding accuracy meets or exceeds that of manual coding. Periodic audits are recommended to ensure continued high-quality results. It's important for organizations to work with their vendor to regularly audit the software and make necessary updates to meet the needs of the organization and address changing payer and regulatory requirements.

“If a coder can spend their whole day focusing on complex code scenarios, they’re going to have a higher degree of job satisfaction and a lower degree of burnout.”

—RYAN MARNEN, UNIVERSAL HEALTH SERVICES



“We are just at the beginning of figuring out what artificial intelligence and machine learning can do in the context of automation.”

—JULIEN DUBUIS, NYM

Impact on Workflow

Revenue cycle automation **helps alleviate the administrative burden for clinicians**, enhancing job satisfaction and reducing burn out. Time spent on administrative work limits time spent with patients and families, key factors impacting physician satisfaction. For coders, autonomous coding fits seamlessly into the existing workflow. In fact, autonomous coding solutions essentially run in the background, taking a first-pass at coding all charts. The charts that can't be successfully coded by these solutions get rerouted to coding staff for manual coding. With autonomous coding solutions, coders receive charts the same way they typically would, but the volume of charts they receive is significantly lower.

By decreasing the volume of charts that require manual coding, autonomous coding solutions help boost coder productivity, eliminating certain repetitive tasks and shifting focus towards more complicated cases that can yield better clinical outcomes and enhance revenue efficiency. As the scope and complexity of the work shifts, implementation of autonomous coding will require changes to key performance metrics for coders. For example, focusing on more complex cases requires greater time to code, so coders may review fewer cases per hour.

What's Next for Autonomous Coding?

Provider organizations have implemented autonomous coding for high-volume outpatient specialties including radiology, emergency medicine, urgent care, primary care, pathology, and laboratory. Expansion into the inpatient space is on the horizon, starting with more routine hospitalizations such as uncomplicated deliveries. As the technology evolves, autonomous coding will be able to take on more complex cases but will leave the most complex cases in the hands of highly skilled, specialized coders.

Conclusion

High-quality, compliant medical coding is an essential component of revenue cycle management performance. Incomplete and inaccurate coding leads to missed payments and denials and directly impacts the organization's bottom line. Budget constraints and staffing shortages present significant challenges for provider organizations. At the same time, the revenue cycle workforce is struggling to keep up with high-volume workloads that are increasingly more complex. Autonomous coding is transforming the revenue cycle, helping ease the workload burden while also enhancing accuracy and improving operational efficiencies. By eliminating much of the routine tasks and data entry requirements, medical coders are able to focus on more complex cases. The speed and accuracy of autonomous coding quickly resolves coding backlogs and accelerates payment cycles. More importantly, it saves time that can be better allocated toward patient care and performance improvement.

KEY FINDINGS

- 1** **Autonomous coding accelerates the medical coding and billing process** by reviewing and coding charts within seconds and then submitting them for billing without any human intervention.
- 2** **Revenue cycle automation can alleviate ongoing staffing challenges** by reducing coders' workloads and freeing up time clinicians can use to focus on patient care.
- 3** **Autonomous coding will not replace the need for medical coders**, but rather support them in their roles and allow them to focus on more complex cases.



About AHIMA

AHIMA is a global nonprofit association of health information (HI) professionals. AHIMA represents professionals who work with health data for more than one billion patient visits each year. AHIMA's mission of empowering people to impact health drives our members and credentialed HI professionals to ensure that health information is accurate, complete, and available to patients and providers. Our leaders work at the intersection of healthcare, technology, and business, and are found in data integrity and information privacy job functions worldwide.

www.ahima.org



About NYM

Nym is the leader in transforming clinical language into actionable information, which can remove inefficiencies that add billions to the cost of care. By combining industry-leading technology with clinical expertise and a deep understanding of medical language, Nym is able to accurately decode medical charts in a way that is fast, explainable and compliant. The Company's innovative solution for revenue cycle management (RCM) takes provider notes within patient charts and translates them into accurate diagnostic and billing charge codes, all within a matter of seconds and with zero human intervention. Along with 96+% accuracy, Nym's RCM solution delivers audit-ready, traceable documentation for every code it generates, ensuring total visibility into why each code was assigned. The Nym solution can be quickly deployed and scaled based on volume and workflow needs, easing administrative burdens and allowing clinical teams to spend more time focused on patient care.

Based in New York City with R&D capabilities in Tel Aviv, Nym is building an interdisciplinary team of specialists including technologists, physicians, mathematicians, computational linguists, engineers, medical coders and more. Investors in Nym include Addition, GV, Bessemer Venture Partners, Dynamic Loop Capital, Tiger Global, Zach Weinberg and Nat Turner.

www.nym.health