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# Driving efficiency and performance in middle revenue cycle with AI and automation

Revenue cycle management helps make sure of the financial health and sustainability of provider organizations, and the middle revenue cycle plays a pivotal role in this process. It's the operational heart of revenue cycle management, encompassing activities such as:

- Charge capture
- Coding
- Documentation
- Revenue integrity

The middle revenue cycle bridges the gap between patient care delivery and financial reimbursement.

Unfortunately, manual processes and fragmented systems continue to contribute to inefficiencies and errors within the middle revenue cycle. Addressing challenges like these requires a multifaceted approach. Technology automation with AI-powered insight puts powerful tools at providers' disposal to transform and optimize the middle revenue cycle, helping them unlock new levels of efficiency, accuracy and revenue integrity. AI-driven solutions use advanced algorithms, machine learning and natural language processing (NLP). Supported by expert-driven services, this technology can streamline workflows, enhance accuracy and improve decision-making across revenue cycle operations.

Middle RCM expert

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Health care executives report that automation is critical to the success of their organizations. In a recent study by HFMA, more than 33% of executives plan to automate 2 or more revenue cycle management functions across 2024, despite growing economic instability.[1] Providers can set the foundation for a financially sustainable future by incorporating the right automation strategies to bolster revenue integrity and improve claims accuracy. And at the same time, they can improve the patient journey.

**33%**
of health system executives plan to automate 2 or more revenue cycle management functions across 2024[1]

> AI and automation technologies offer a transformative solution to the challenges faced by health care providers in the middle revenue cycle. Automation enables the execution of repetitive tasks and processes with minimal human intervention, freeing up valuable resources and reducing administrative burden.
>
> **– Abella Pagador**

## Enhancing revenue integrity in coding and documentation

Accurate coding and documentation are essential for securing appropriate reimbursement and compliance with regulatory requirements, and payers want proof that any and all care given to a patient is medically necessary. Yet manual coding processes and documentation workflows are prone to errors and are largely inefficient, so it's easy to see how organizations become overwhelmed.

According to the 2024 CPT code set released by the AMA, the annual update included 349 editorial changes. This included incorporating 230 additions, 49 deletions and 70 revisions into the existing library describing 11,163 medical services and procedures.[2]

Introducing automated coding and direct-to-bill procedures can significantly enhance productivity. These automated functions equip coders and CDI teams with the essential tools for achieving maximum success. Code recommendations and case identification markers make sure all required documentation is present. And the inclusion of case prioritization features in the work list enables coders to concentrate on critical cases.

AI-powered NLP algorithms can analyze clinical documentation in real time. This gives coders intelligent coding suggestions and identifies potential documentation gaps and errors. Other automation tools can assist clinicians in capturing and documenting clinical information accurately and comprehensively within electronic health record (EHR) systems.

Automated coding assistance can help alleviate the burden on coding staff, reduce turnaround times and enhance revenue cycle efficiency. Combining AI-driven insights with an experienced clinical documentation improvement team and coding compliance experts focused on improving the quality of clinical documentation can help providers establish a more accurate representation of health care services provided.

**A clinical documentation improvement team can help:**

Identify trends, growth and gaps in diagnoses and procedures

Complete concurrent or retrospective reviews of health records

Provide education and best practices on querying and documentation

Facilitate collaboration between physicians and other team members

By addressing these challenges effectively, providers can streamline revenue cycle operations, improve financial performance and enhance patient satisfaction.

## Assessing claims prior to payer submission with AI-powered insights

One of the most significant challenges in revenue cycle management is claim defects. Up to 26% of these errors may be caused by mid-cycle issues resulting from things like coding errors, documentation deficiencies or failure to meet payer requirements.[3] Providers can address these pain points by focusing on coding accuracy and ensuring claims are complete prior to payer submission to improve clean claim rates.

AI and automation offer invaluable support to health care providers in submitting accurate and complete claims data. Through AI-powered algorithms and automated processes, providers can streamline various tasks such as coding, documentation review and claims submission. This helps reduce the likelihood of errors and omissions while establishing sound coding and billing practices for appropriate reimbursement.

Automation also streamlines the process of ingesting and integrating coding and payer guidelines. Staying abreast of guideline updates is paramount for providers to make sure of accurate reimbursement and compliance. By automating integration of coding and payer guidelines, care organizations can efficiently incorporate the latest rules and regulations into their revenue cycle workflows. Automation facilitates real-time updates, enabling organizations to swiftly adapt to changes and minimize revenue cycle disruptions. Leveraging automation in this capacity empowers health care providers to:

- Maintain regulatory compliance
- Improve revenue capture
- Deliver high-quality patient care

AI-powered analytics and predictive modeling also play a crucial role in identifying patterns and root causes of claim errors. This enables proactive interventions to help prevent future occurrences. AI algorithms analyze historical claim data and payer behavior, which helps predict potential problems before they occur. Providers can then take preemptive actions to address underlying issues as they prepare claim data for submission.

The U.S. health care system loses approximately

**$935M**

per week due to medical billing errors like coding mistakes and typos[3]

As providers work to address rework and inefficiencies, they should augment this technology with expertise in claim resolution to support timely and accurate reimbursement. Services such as claim investigation and remittance advice monitoring can help providers secure appropriate reimbursement. These expert services play a pivotal role in augmenting the capabilities of AI-driven denial management initiatives and support your organization in navigating complex billing regulations and payer policies. By collaborating with AI-powered analytics platforms, RCM experts can interpret data-driven insights to develop customized strategies for claims issue prevention and resolution. They provide valuable guidance to clinical and administrative staff, offering training programs, coding audits and performance improvement initiatives to enhance billing accuracy and compliance.

## Improving the patient journey with quality-focused coding

As we established above, AI technologies enhance our ability to capture and interpret complex data, allowing for more precise documentation of the services rendered. But the benefits of AI extend far beyond coding accuracy and appropriate reimbursement. By leveraging AI-driven algorithms, health care providers can make sure that every aspect of the patient encounter is accurately coded, from initial assessments to follow-up care. This leads to a more complete and detailed representation of the care provided. And this is important — in the last year, approximately 18% of insured adults experienced a denied claim, with 26% of those experiencing a delay in treatment because of it.[5]

Through meticulous coding practices, augmented by the benefits of AI, we can provide a comprehensive and accurate portrayal of the patient journey within medical claims. That will lay the foundation for capturing appropriate reimbursement and improving the patient journey.

RCM experts have specialized knowledge and experience in analyzing this complex data and interpreting AI-generated insights. The output from these experts is referenced by clinical teams to develop evidence-based care plans, discharge protocols and care coordination strategies tailored to individual patient needs. By combining AI-driven predictive analytics with human expertise, providers can implement comprehensive initiatives in areas like length of stay (LOS) analysis that deliver measurable improvements in patient outcomes, operational efficiency and financial performance throughout the middle revenue cycle.

By leveraging predictive models that continuously learn from real-time data inputs, providers can implement targeted interventions and care plans to:

- Optimize resource utilization
- Expedite discharge processes
- Improve care coordination
- Enhance patient outcomes

Quality-focused coding helps secure accurate reimbursement and promotes patient-centered care. By capturing the full scope of services delivered, health care providers can assess the effectiveness of treatments, track outcomes and identify areas for improvement. Complete and accurate documentation enables continuity of care. It helps make sure all members of the health care team have access to essential information to guide decision-making and provide optimal care. Ultimately, through a commitment to quality-focused coding practices, providers can uphold standards of excellence in patient care while safeguarding financial integrity through accurate reimbursement.

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Patients reported

**8.2%**

lower patient satisfaction scores when treatment was delayed by claim denials[6]

By harnessing the power of artificial intelligence and automation, health care organizations can overcome longstanding challenges and unlock new opportunities for revenue cycle optimization.

**– Abella Pagador**

## Embracing innovation for a brighter future

The middle revenue cycle represents a critical area of focus for health care providers seeking to optimize financial performance, enhance operational efficiency and deliver high-quality patient care. By harnessing the power of AI and automation, health care organizations can overcome longstanding challenges and unlock new opportunities for revenue cycle optimization.

Embracing innovation and leveraging cutting-edge technologies is essential for driving sustainable growth and sets the foundation for the financial viability of care organizations. Addressing claims errors and issues, reducing length of stay, improving revenue integrity in coding and documentation — AI and automation technologies offer transformative solutions that aim to revolutionize health care revenue cycle management for years to come.

**Contact us to learn how Optum can help drive efficiencies and automation across the entire revenue cycle.**

optum.com/contactus


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Abella is a seasoned health care IT professional with extensive hands-on involvement in system management, project management and product management. She has experience and knowledge in end-to-end revenue cycle management, EMR build, cardiology and medical imaging systems, and clinical data coordination spanning both the hospital and ambulatory health care environments.

Prior to joining Optum, Abella assisted in successfully transitioning 2 health care systems from paper-based records and disparate systems to an EMR, streamlining processes and improving patient care.

Abella is committed to continuous learning and is passionate about making health care accessible and affordable for all. She holds a Bachelor of Science in Information and Computer Science from University of California, Irvine.


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