



# THE NEXT PHASE OF CDI: EMBRACING AI FOR GREATER IMPACT

How advancing technologies are  
boosting clinical validation, query, and  
workflow processes





CDI is undergoing considerable changes, as seen in the fluidity of job roles, the adoption of remote work models, an uptick in retirements, and a trend of nurses not returning to their pre-pandemic CDI roles. Hospitals are revisiting and revising traditional reporting structures, increasingly directing CDI departments to report to revenue cycle management instead of the C-suite or through HIM. This shift underscores CDI's growing influence within the healthcare landscape.

As organizations adapt to these transitions, the integration of artificial intelligence (AI) and automation within CDI operations is on the rise. These tools are increasingly helping CDI professionals prioritize their most impactful work to improve quality, denial prevention, and revenue preservation. Consequently, advanced technology is becoming a critical factor in defining the strategy and future of CDI programs.

“With new generations adept at technology joining the workforce, AI has become second nature—it’s reshaping the way we work.”

**Holly Flynn, RN**, senior customer success executive, Nuance, a Microsoft company

### **The AI edge in CDI advancement**

AI's seamless integration into CDI processes equips teams to zero in on critical cases, leading to greater job satisfaction and more efficient operations. **Holly Flynn, RN**, senior customer success executive for Nuance, a Microsoft company, observes, “With new generations adept at technology joining the workforce, AI has become second nature—it’s reshaping the way we work.” **Jerry Burakoff, RN, CCDS**, customer success manager at Nuance, a

Microsoft company, adds, “Generationally, AI has had a significant impact, decreasing the learning curve in CDI through an engine that supports a person’s thoughts while simultaneously providing education.”

Findings from the 2023 ACDIS survey focused on AI in CDI, supported by Nuance, a Microsoft company, indicate healthcare organizations find AI’s benefits most significant in clinical validation (20%), quality management (15%), staff collaboration (15%), DRG auditing (11%), and denials management (10%). Insights from 213 respondents—primarily CDI specialists, managers, and directors, most of whom are registered nurses and certified clinical documentation specialists (CCDS)—reveal current trends and hurdles in CDI.

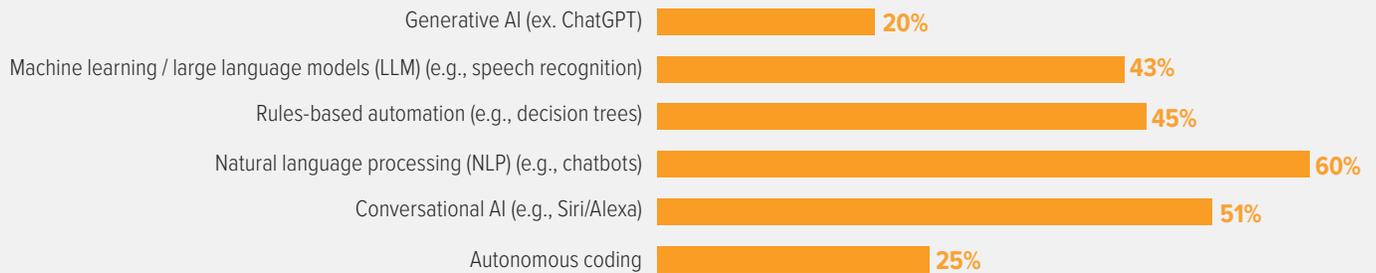
Flynn echoes the survey findings, emphasizing AI’s significant contribution to enhancing data quality. “Data is the cornerstone of our work; it directs our focus and supports anecdotal evidence, which is a big piece of what excites CDI teams. The accuracy of the

data instills trust in their work,” she says. Flynn also points out that C-suite executives increasingly seek trustworthy data to make strategic decisions.

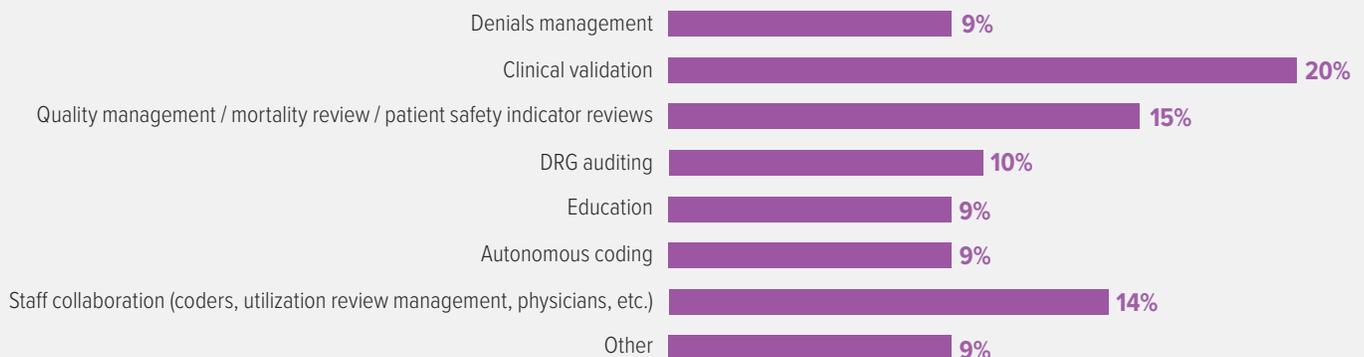
Burakoff agrees, stressing the indispensability of data in CDI’s evidence-based framework. He cites the growing adoption of AI in hospitals, attributing it to its ability to boost efficiency, job satisfaction, and financial performance, particularly in the wake of revenue deficits caused by the pandemic. However, he asserts, “AI enhances rather than replaces the clinician’s education and experience. A CDI program is successful because of that clinical subject matter expertise.”

The survey also reveals a fair amount of awareness of AI among CDI staff, with 60% of respondents saying they are most familiar with natural language processing, 52% with conversational AI, and 46% with rules-based automation. Only 26% are familiar with autonomous coding, and 20% with generative AI.

### Which examples of artificial intelligence (AI) are you most familiar with?



### In which area do you think AI would be most impactful/beneficial?



## Navigating the AI transformation at Baptist Health South Florida

Baptist Health South Florida's leaders report substantial improvements in CDI tools, notably with the incorporation of AI. "AI-enriched CDI tools are improving our workflow, allowing us to prioritize cases effectively," says **Katia Jimenez Reyes, MD, CCDS**, director of CDI at Baptist Health South Florida. "Now we are focused on cases with the most opportunities, including impactful queries to shift the DRG, as well as those that prioritize quality indicators, which is essential as CDI moves to quality improvement, population health, and value-based care programs."

**Gabriel Colón, MD, MHA, CCDS**, director of CDI at Baptist Health South Florida, agrees and notes, "Feedback from physicians has been greatly affected by our AI-driven CDI tool, with response and agreement rates increasing." He is also pleased that the new AI-driven tool reports on both financial and quality metrics. "The 'no response potential impact' metric has been one of the things that many physicians ask for now, and it helps improve physicians' responses and feedback," he says.

Baptist Health South Florida has advanced through several stages of CDI software, culminating in adopting an AI-powered platform that enhances reporting capabilities and more. The previous software, while beneficial for its natural language processing capabilities for scanning documents, presented integration challenges, according to Colón. "The software was embedded in the electronic medical record, which caused instability when interfacing between the different EHRs," he says. "It didn't provide that 'now' capability that we have with AI, which is not integrated." The new CDI tool now provides precision in queries and reporting that was previously unattainable. Its AI-driven features learn from workflows when a CDI specialist accepts or rejects a diagnosis suggestion.

The AI software also offers a strategic advantage by automatically identifying and prioritizing cases with significant opportunities for queries. The current AI-driven system supports advanced reporting and

uncovers potential revenue recovery by tracking unanswered queries. "We can do many different things now," Colón says, "including working better with the HIM and quality departments, as well as revenue cycle and with the physicians."

**"The once steep learning curve for mastering the CDI process and software is flattening as AI integrates seamlessly into daily tasks."**

**Jerry Burakoff, RN, CCDS**, customer success manager, Nuance, a Microsoft company

The integration of AI in CDI at Baptist Health South Florida has led to improvements across the board in terms of operational efficiency and staff contentment. Jimenez Reyes says, "We're now able to track our queries by patient safety indicators (PSIs), hospital-acquired conditions (HACs), and direct physician education based on their most frequent diagnoses." This data-driven approach is foundational to the organization's strategy to optimize CDI efforts. "We use the data to work smarter, not harder," she adds. For example, by analyzing trends, such as frequent queries on malnutrition or metabolic encephalopathy, physician education can be more targeted.

Colón adds, "We also have reporting for severity of illness and risk of mortality. This is important because many physicians want to understand their patients' critical care needs and mortality risks." He notes that when the data indicates a patient may not need such intensive care, CDI can quickly communicate with the utilization management department for the patient's transition to a more suitable care setting, like a step-down unit.

Both Jimenez Reyes and Colón also say there is minimal turnover in the CDI program due to establishing a solid foundation at its inception in 2011. "We created a pretty strong CDI team with great workflows. Everybody knows what they're doing and participates. We're like a big family," says Jimenez Reyes. Colón adds, "Staying up-to-date on

AI technology has improved job satisfaction. Now, we don't miss documenting diagnoses or procedures that we couldn't catch before, and the team is happy because of it."

## "AI can be a significant tool for targeting diagnoses that are being denied, such as sepsis."

**Katia Jimenez Reyes, MD, CCDS**, director of CDI, Baptist Health South Florida

The upgrade to AI-driven tools also means queries can now be sent based on physician preferences. "One of the big challenges with the previous software embedded in the EHR is the way queries were sent to physicians was confusing because the system directed queries from pharmacy, CDI, and the UR department," says Colón. He adds that CDI now sends queries based on physician preferences, such as by text through an encrypted messaging system. "This helps a lot in terms of physician satisfaction."

## CDI's biggest obstacles

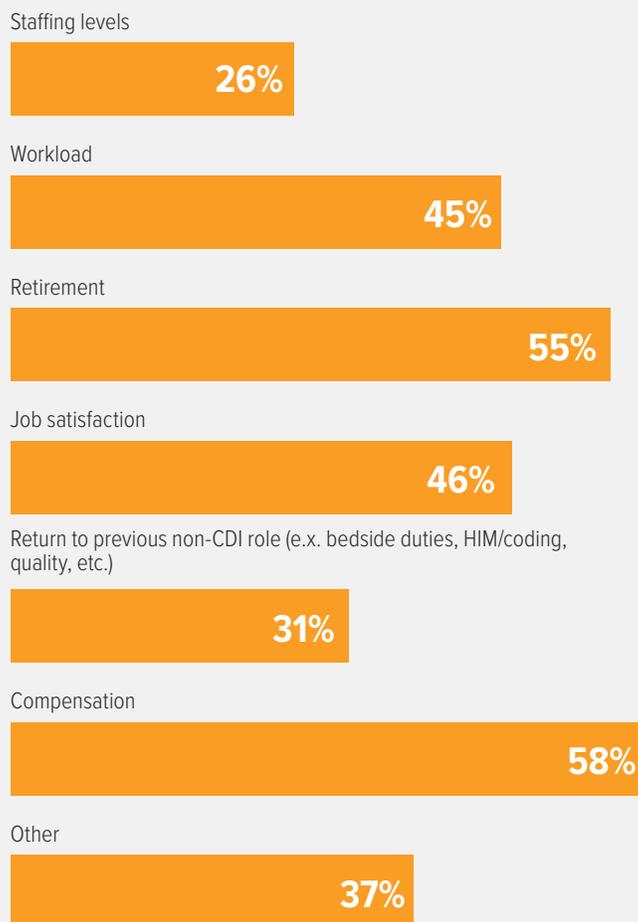
CDI programs are grappling with high turnover rates, stemming from a range of factors that include shifting workplace expectations in the post-pandemic era. According to the survey, compensation (58%), retirement (55%), and job satisfaction (46%) are the top reasons for leaving CDI. Workload concerns (45%) and the return to former non-CDI roles (30%) were also significant contributors.

Flynn and Burakoff recognize staffing as a critical concern, noting the influence of regional disparities and unionization on compensation. Flynn remarks, "Nurses in CDI roles, often with extensive experience, feel their work should be valued equally to that of bedside roles because they also drive excellence for that hospital." Flynn also observes that many nurses returning to CDI since the pandemic indicate a broader preference for remote or hybrid work arrangements. "Hospitals with hybrid models report higher CDI satisfaction," she states.

Another potential challenge is the significant number of CDI professionals with long-term healthcare or nursing experience who have held their current roles for less than five years, pointing to a dynamic shift within the field. The data shows that 40% have been in their current profession for 16-20+ years, while 61% have been in their current role for just 0-5 years. The substantial portion in newer roles may reflect major post-COVID workforce shifts, including more CDI professionals transitioning to roles outside of hospitals, such as consulting or vendor positions.

Burakoff also speaks to the need for change management in the face of persistent anxiety surrounding AI and job security, adding, "It should be communicated that AI is a critical tool to help you, and it is an integral part of our lives."

### What are the top three drivers of turnover in your CDI program?



## The future of AI in CDI programs

As healthcare systems like Baptist Health South Florida navigate the modern healthcare system, AI's role is proving invaluable in strengthening CDI programs.

The value of AI is especially evident in denials management, particularly for complex cases like clinical validation denials unrelated to medical necessity. "AI can be a significant tool for targeting diagnoses that are being denied, such as sepsis," says Jimenez Reyes. She adds that the technology ensures cases are appropriately clinically supported, or if necessary, the physician can obtain documentation before the patient is discharged.

Jimenez Reyes also notes AI's growing help with quality improvement and educational efforts. The latest AI tools identify specific diagnoses for additional validation and provide instant education. "Our current tool presents specifications related to PSIs while guiding actions in those scenarios. Education is crucial for the evolution of any CDI program," she explains.

Looking ahead, Baptist Health South Florida is devising a comprehensive CDI strategy to cover all

patient encounters across its three hospitals, Colón shares. "By 2024-2025, we aim to achieve 'full-house' CDI coverage." Jimenez Reyes supports this vision, citing the robust reporting features of the current software as a catalyst for this strategic expansion.

**"We can do many different things now, including working better with the HIM and quality departments, as well as revenue cycle and with the physicians."**

**Gabriel Colón**, MD, MHA, CCDS, director of CDI, Baptist Health South Florida

Burakoff and Flynn are also optimistic about AI's growing role in CDI. "The once steep learning curve for mastering CDI tools is flattening as AI integrates seamlessly into daily tasks," Burakoff observes. Flynn adds, "Leadership's effective communication of AI's value to the patient is critical to driving trust among the team. It's an exciting period for CDI, with the promise of smarter tools enhancing our important work."

