

Trend Watch: The Promise of AI and Automation

The need to capture and manage data in a meaningful way continues to grow

pandemic still fresh, how will AI reshape strategic plans moving into the future?

David Johnson, chief innovation and information officer with Inspira Health Network in Vineland, New Jersey, says the pandemic significantly changed the organization's AI adoption strategy. "COVID-19 advanced and accelerated how we are going to be using AI in our organization," says Johnson, noting that during the pandemic's first surge in 2020, Inspira Health and other regional providers collaborated to build a COVID-19 predictive model. "The model helped us understand how COVID was going to impact our state, region, and service area," he says. "AI has helped us predict volumes to manage our capacity, develop surge plans, and create algorithms to manage our PPE levels and PPE distribution across the network."

Johnson says current AI trends in healthcare revolve around any opportunity to automate a repetitive process. "A lot of this is happening in the back office, including processing claims." However, he adds that healthcare organizations are also increasingly turning to chatbots to interact with patients and triage their needs before they talk to a

In recent years, healthcare organizations, especially larger health systems, have used artificial intelligence (AI) to do everything from automating parts of the revenue cycle such as claims eligibility verification processes to engaging patients with personalized experiences at digital touch points. They turned to AI and automation during the height of the pandemic to predict and manage patient surges, maintain PPE supplies, and triage and communicate with patients before receiving care. With lessons learned from the

person. "We saw a lot of that during COVID in response to the massive number of inquiries about COVID," he says. "Inspira Health turned to AI to respond to those inquiries in a very logical and responsive way, along with many of our industry colleagues." AI in healthcare diagnostic imaging is another trend that is gaining momentum, he adds.

"AI and automation are very mission-specific to each organization," says Johnson. "Larger health systems with academic affiliations may have the resources to explore AI in different ways, through research or more sophisticated models that can actually drive patient care plans and outcomes." He adds that a small rural community health system like Inspira Health, with three medical centers, benefits from this work. "Like many other organizations our size, we need to use AI to solve practical problems like automating processes, improving our patient experience, or creating convenient options for our patients," he says.

AI acceleration

Johnson says AI is central to the organization's long-term digital health strategy. "Part of our entire strategic plan is focused on offering patient-centric convenience and access, and we know the way to do that is through AI and digital means." He adds that Inspira Health has started this process by using AI to map the patient's journey. "We've deployed entire teams to follow patients on their journey from the time they enter our facility to discharge, and even



post-care, to understand their experience. We are aggregating that data so we can launch an intentional digital-first initiative,” he says. The goal is to build convenient digital options for every patient and consumer touch point across the system. For example, using different digital access points, patients can now self-schedule, complete a paperless registration, add their names to a virtual waitlist, and view wait times ahead of their visit, says Johnson. “We’re using AI to make those services smarter and more responsive for our consumers.”

Inspira Health is also using robotic process automation (RPA) to help frontline and back-office staff better manage workflow processes. “We built and rolled out one RPA process last month that helps staff manage claims processing,” says Johnson, noting that the goal is to save time and resources and allow staff to focus on critical processes that support patients or manage operations. “We are learning from it and now looking at how we can build a second use case to continue to tackle workforce shortages,” he says. Johnson says a big part of Inspira Health’s digital strategic planning over the next 18–24 months will also focus on developing secure communication between physicians and between physicians and patients. A key challenge will be to create HIPAA-compliant digital communication using AI.

Innovating from within

“AI is not some hype that will simply go away,” says Thomas Fuchs,

Dr.sc., dean for artificial intelligence and human health at Mount Sinai Health System in New York City. “Today, there is more data produced in healthcare than in finance, media, and all the other disciplines. AI and machine learning are the only way to tackle the explosion of healthcare data in a meaningful way that provides value to clinicians and patients.”

To this point, Mount Sinai is taking a significant step to be a leader in the space by creating a central hub for computation and AI through its recent launch of the Department for AI and Human Health, says Fuchs. The department will lead AI-driven transformations across clinical settings to provide personalized patient care. Fuchs says Mount Sinai is also offering a new PhD concentration approved for AI and emerging technologies.

For larger health systems like Mount Sinai, an academic medical system that includes eight hospital campuses, AI is key to driving business insights and connecting disparate data sources, including patient demographic and geographic information, says Fuchs. “We want to build AI that makes sense, that helps physicians and clinicians, but that is also done in an ethical way,” he adds, noting that Mount Sinai is uniquely poised for success given its large and diverse patient population.

Having an AI building in the middle of the Mount Sinai campus is intentional, says Fuchs. “When developing AI, it’s key that it’s done together with physicians. You have to know what is going on in the hospital trenches, otherwise it is not useful.” He notes that Mount Sinai’s digital health team developed AI programs to detect early exposure of COVID-19 by eliminating data siloes. Moving forward, the department will be completing numerous AI projects, including one that develops digital biomarkers for precision medicine in treating cancer and other diseases at the point of care.

Automation transformation

The Department of Pediatrics at the University of Colorado School of Medicine (CU) is also more intentionally using digital tools, including automation, to help navigate a complex care delivery system, says Rudy Lindsey, practice director for pediatric medicine at CU. “The digital era is here, and we are adopting new technologies and tools to keep pace with a rapidly changing environment.” One transformational tool is the department’s centralized scheduling system.

Lindsey says CU introduced the automated scheduling system a few years ago, reducing scheduling time by 50% for its 1,000+ faculty providers. “Historically, scheduling practices varied by departments,” says Lindsey. “Some used Word® documents and Excel® spreadsheets, while others literally had a paper calendar hanging in the workroom,” he says, adding that these static, largely paper-based processes made it difficult to track how physicians were allocating time across patient care, administrative, and research duties. “It was manual and extremely variable,” says Lindsey.

The scheduling platform, which uses rules-based automation, enables providers and administration to manage schedules on a mobile app. “Everything now lives in a centralized, web-based platform that allows real-time scheduling and centralized communication,” he says. Automation has been a critical timesaver. “For some of our hospital-based practices like emergency medicine, we now use specific algorithms to automate vacation time and other time restrictions, which previously took hours of manual labor to piece together across a large schedule,” says Lindsey.

The system also has been instrumental in flagging scheduling gaps and helping clinicians meet practice goals. Lindsey says that while CU initially adopted the platform to track clinic and on-call schedules for providers, it is now also used to better understand how providers allocate their time to vacation, research work, and administrative tasks during the rest of the week. The software allows CU to measure performance against clinician FTE metrics and share that data with administrators and faculty leaders.

“Now we can help everyone meet their targets, which has an impact on financials,” says Lindsey. “It is helping us understand our workforce needs and allowing us to pivot and reallocate resources to different areas or practices.” ■



How Healthcare Finance Automation Is Transforming Accounts Payable

Healthcare providers modernize vendor payment processes using AI and machine learning

Healthcare is a high-growth space, experiencing tremendous disruption, with hospitals and physician offices stretched for resources. As pressure mounts to improve healthcare performance, providers are automating across the board, from clinical applications (like robotic-assisted surgery) to back-office processes (like finance functions). Accounts payable, saddled with manual processes, errors, and fraud, is a crucial area ready for automation. Automating vendor invoice processing and payments ensures timely, accurate payments and reduces fraud, allowing organizations to divert resources to critical high-dollar areas, like the revenue cycle. “Automating accounts payable and the finance office is an essential step on the path to digital transformation,” says Nasser Chanda, CEO of Paymerang. Below, Chanda discusses the top ways healthcare organizations are benefiting from financial automation.

Q: How is Paymerang changing the accounts payable space for hospitals and healthcare providers?

Nasser Chanda: Many healthcare providers have antiquated financial processes that still rely on manual, paper-based workflows. Vendor invoices, in particular, require a high degree of manual intervention. Paymerang helps healthcare organizations by automating all aspects of vendor invoice processing, including capturing invoice data using AI, approving invoices through electronic workflows, posting invoices with the push of a button to the general ledger, issuing electronic payments, and reconciling bank accounts. But we do more than automate payments. We provide white-glove service to our clients and their vendors, ensuring on-time payments that prevent supply-chain disruptions. Ultimately, automating invoice and payment processing increases visibility, control, efficiency, and accountability while reducing waste and fraud.

Q: Why is it imperative healthcare providers automate their accounts payable?

Chanda: Provider organizations need to be ready for the digital age, which means automating as many processes as possible to reduce unnecessary work and costs. Automation brings greater efficiency to hospital financial operations, allowing finance departments to focus more on the revenue cycle, including billing and collections. Similarly, with automation on the physician practice side, office managers can focus on running world-class healthcare facilities and supporting doctors. This results in better-run practices and improved patient care.

Q: Why is fraud on the rise, and how can finance professionals better protect their organization?

Chanda: Fraud is increasing across the board because the healthcare industry transacts in high-dollar invoices. We frequently work with

law enforcement and clients to prevent fraud, given our industry knowledge and experience. There are two primary forms of fraud: fake invoices and fake vendors.

Preventing fake invoices requires a proper approval process that supports transparency, accountability, archiving, and paper trails to make sure the right people approve invoices and that the software is checking for duplicates.

Preventing vendor impersonation requires taking a critical look at every interaction and change request from a vendor. Finance departments are experiencing an uptick in fraud attempts from organized crime syndicates in the form of business email compromise and social engineering. These sophisticated organizations typically try to get providers to change payment methods by impersonating the vendor. Many



Nasser Chanda
CEO
Paymerang

healthcare organizations can't tell the good actors from the bad ones and thus change banking information and send money to the wrong place. It's essential to be more vigilant—check for phishing, avoid clicking on bad links, make sure emails are from credible sources, and pick up the phone to call the person if you are suspicious. Automating accounts payable processes and working with an experienced partner will help protect your organization against fraud.

Q: If you could tell finance teams one thing about your service, what would it be?

Chanda: You're not too busy to get started. Our program takes a week or two to launch and our clients are up and running with a full-scale finance automation suite right away. We don't just sell software; we are a full-service partner to healthcare providers, offering technology, education, and the human experience. We take the manual work off your finance team's plate, allowing them to focus on high-priority areas. We also support our software solutions with a team of payment experts, not chatbots, who work closely with vendors and clients, resulting in a world-class Net Promoter Score. ■





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“Paymerang has far exceeded our expectations in terms of quick implementation, efficiency gains and cash rebates. We are thrilled with the program.”

Accounts Payable Manager, St. John's Medical Center