Healthcare Industry

Intelligent Automation in Healthcare

How Payers Can Harness Next-Gen Solutions to Improve Patient Outcomes

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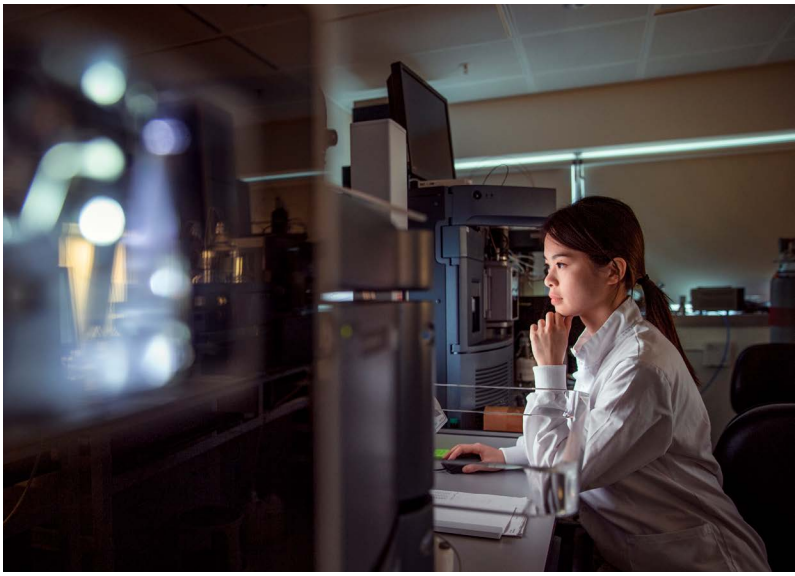
Healthcare conversations often focus on the industry's persistent challenges: workforce shortages, rising costs, limited access, complex regulations, and ethical dilemmas. While these issues are undeniably critical, it's time to shift the conversation towards solutions.

Among the most vital solutions is intelligent automation (IA), the use of artificial intelligence (AI), process management, robotics, and other emerging technologies to automate manual processes and streamline decision-making. IA has the power to address these challenges head on, seamlessly integrating into nearly every facet of healthcare delivery. In fact, IA has so many potential healthcare applications that for simplicity's sake, we're going to categorize them by "payer" (insurers) and "provider" (hospitals) applications.

In this article, we'll focus on how IA can revolutionize the payer experience, and ultimately guide patients toward more affordable high-quality care models.

IA Can Optimize Operations and Ignite Innovation

In a sea of opportunity, manual processes, overly complex tasks, data silos, and technical debt are the anchors weighing payers down and hindering their ability to evolve and innovate. Insurers still navigating these challenges don't have the means to help their customers find the best care at the best price.



IA can help right the ship. With the right blend of expertise and holistic vision, insurers can harness the power of IA to:

- Automate manual processes like claims processing and eligibility verification to free up human resources for more strategic and creative activities.
- Unify disparate data such as physician notes, lab results, and family history into a complete and connected view of a patient's health history for better care coordination.
- Simplify complex tasks like risk assessment and treatment plan development by breaking them into small, manageable steps to improve efficiency and accuracy.
- Modernize legacy technologies like outdated electronic health records and financial management systems by integrating them with modern tools and tech (i.e., APIs, AI-powered tools, cloud-based platforms) to reduce technical debt and streamline workflows.

CapTech did something similar for a leading health insurer looking to optimize its analytics operations and infrastructure. By deploying IA solutions to enable enhanced real-time data analytics within its new cloud ecosystem, our custom-built MLOPs architecture improved the performance of predictive clinical models such as likelihood of readmission, likelihood of hospitalization, and disease progression. We also eliminated manual downtime and leveraged existing data to address emerging needs. Additionally, we used IA to automate its Natural Language Processing model for customer service interactions, ensuring the model would maintain its stability and performance.

IA Can Identify More Cost-Effective Options

If you've ever looked at a healthcare bill or claim, you've probably seen strings of numbers known as ICD-10 codes or CPT codes — two billing coding systems used by the industry to describe the diagnosis and the procedure, respectively. Payers use these codes to determine how much money to reimburse providers. For most payers, that's where the use of these codes ends, but IA can unlock additional hidden potential.

While payers cannot directly send patients to specific facilities based on ICD-10 and CPT codes, they could leverage these codes during the prior authorization process to encourage patients to consider more affordable, offsite facilities for specific services, without compromising their health or autonomy.

Along with billing codes, payers and providers already analyze a variety of other data to understand real-time costs for prior authorization purposes. If they wanted to, they could harness IA for more rapid and robust data analysis, and more efficiently identify procedures often performed at expensive hospital centers (i.e., scans, bloodwork, x-rays), which are also offered at more affordable outpatient facilities. Payers could then provide patients with real-time info about potential cost savings through offsite options for specific procedures.

These offsite healthcare models include urgent care, outpatient clinics, remote patient monitoring, and telehealth, and they are often more affordable in part because they require less staff, and less senior staff in particular. These models are also built on microservices architecture, which break down healthcare IT functions into smaller, independent services that perform a specific task.

> **Compared to monolithic IT systems traditional healthcare systems employ, microservices are often less expensive to develop, and are more scalable, flexible, and innovative, allowing providers to deliver more affordable and accessible care.**

Due to declining profits, staffing challenges, increasing patient demands, and other healthcare hurdles, offsite microservice facilities are expanding, and payers who invest in IA have the opportunity to wring more mileage out of billing codes and steer consumers toward these more accessible and affordable options. Payers could even take these capabilities further by offering patients incentives like reduced co-pays or deductibles for choosing the more cost-effective options.

While the infrastructure is in place to pilot this solution through the prior authorization process, it isn't scalable. Outside of prior authorization, data transfer from providers to payers often takes weeks. By the time the data arrives, the patient may have already scheduled or received the service. These bureaucratic delays prevent payers from using that data to identify and recommend more cost-effective options in real-time. To shorten this timeframe and empower payers with real-time decision-making capabilities, a complete infrastructure overhaul would be necessary. However, this pilot serves as a glimpse into a more efficient, affordable, and equitable future for the healthcare industry.

IA Can Lower Drug Prices

Pharmacy Benefit Managers (PBMs) manage prescription drug benefits on behalf of patients, pharmacies, drug manufacturers, and payers. Payers use PBMs as middlemen to negotiate drug prices and design formularies that determine what drugs an insurance plan covers and how much they will cost.

Designing these formularies is a balancing act. To negotiate drug prices with manufacturers, for example, PBMs will typically offer them a lower price and a rebate in exchange for securing a spot for their drug on the payer's formulary.

To drive down drug costs and improve patient outcomes, payers and PBMs who are not already doing so should invest in Value Based Formularies (VBFs). Unlike traditional formularies, the strategy behind VBFs is to determine if the value of a pharmaceutical intervention justifies the cost.

Using IA to analyze vast amounts of data such as past claims, patient demographics, and drug utilization patterns, insurers and PBMs can:

- Keep VBFs continuously updated based on new information.
- Optimize VBFs by assigning drugs with a high assessed value — meaning the additional cost of the specific intervention or treatment is relatively small compared to the additional health benefit it offers — to lower copayments, and drugs with a low assessed value to higher copayments, encouraging patients to prioritize interventions that deliver significant health benefits at a lower cost.
- Negotiate smarter prices by predicting future needs and identifying generic, or underutilized, cost-effective medications, strengthening PBMs' bargaining power against manufacturers.
- Achieve a formulary that is predictive of future medical events.
- Facilitate collaboration by powering real-time dashboards, like the one CapTech built for a leading federal health services company to make data more accessible and usable across departments. With a unified and transparent view of drug performance and value available to all stakeholders, IA can enable joint decision-making and align everyone toward affordable, effective treatments for all.

Intelligent Automation Takeaways

Streamlining complex manual processes and fueling data integration can help generate new insights, boost productivity, and set the stage for innovation.

Leveraging ICD-10 and CPT billing codes to better understand costs and guide patients toward more affordable care models can reduce cost pressures on the system while driving better patient outcomes.

Value based formularies help protect patients from rising prices, and real-time data can strengthen negotiation power and facilitate collaboration between all stakeholders.

Faced with ever-rising costs and shrinking margins, the need for a radical transformation is more urgent than ever. With intelligent automation, we can break free from the anchors weighing us down and work together to drive better healthcare outcomes for all.

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