Boosting Patient Experience and Easing Staffing Burdens with Automation

As digital transformation continues to evolve in the healthcare industry, automation is becoming the ideal solution to support myriad use cases

S imple patient engagement isn't enough anymore. From AI-powered chatbots to intelligent hospital rooms, providers are increasingly using automation and other emerging digital technologies to improve the patient journey along the care continuum. From appointment booking to post-discharge follow-up, health systems are innovating and personalizing their patient-facing functions, embracing human-centered design and automating tasks to remove friction for patients and staff members alike.

In a HIMSS editorial webinar sponsored by Automation Anywhere, Rachael Acker, Vice President of Experience Strategy at Mad*Pow, joined Yan Chow, MD, Global Healthcare Leader at Automation Anywhere, in a conversation about how health systems can employ automation beyond patient engagement to improve the delivery of healthcare.

A challenge with wide-reaching implications

Amid the many challenges healthcare organizations face today, what is *not* surprising is that patient experience is high on the list. In a talk that Dr. Chow gave at the height of the COVID-19 pandemic, he polled his audience – a group of 160+ in healthcare management – about their health systems' top priorities. Even when beset by revenue cycle management and supply chain issues, a significant majority said that patient care experience was their top concern.

This is understandable considering the wide-reaching implications of patient care experience – from patient satisfaction and health outcomes to NPS (Net Promoter Scores) and hospital revenue. Downstream, even healthcare worker job satisfaction is affected. As Dr. Chow pointed out, patients don't gauge quality of care as medical professionals define it, but rather through the lens of experience. If they leave an encounter feeling ignored or not getting an issue resolved, they will lose trust in their providers. "This begins a cycle," Chow said. "If they don't trust their providers, they don't follow instructions – and that leads to bad outcomes and more distrust."

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RACHAEL ACKER | Vice President of Experience Strategy | Mad*Pow

Acker, whose design agency improves the experience people have with technology, services, organizations and each other, went even further: "When we talk about patient experiences today, we tend to focus on product touchpoints rather than the services around those products. And so, framing patients as 'consumers' is the logical trend, but it's shortsighted."

For Acker, these challenges feed directly into system-level issues within the healthcare industry. She voiced concern over insufficient attention being paid to patient agency and health data ownership, equitable decision-making and socioeconomic drivers of change. "While the flow of so much patient data should enable the design of hyper-personalized, trusted patient experiences, the decision engines aren't able to adapt to diverse situations. Models are trained on data that's prone to the same biases that have always existed in healthcare, and our decision-makers are now repeating the same mistakes with more sophisticated tools," she noted.

On the other side of the stethoscope, Dr. Chow noted that providers are also suffering from escalating frustration and burnout due to the pandemic's ongoing impact. Due to increased demands for care, staffing shortages, lack of equipment, personal hazards and mental health issues, clinician dissatisfaction has reached unprecedented heights.

Chow and Acker agreed that, to boost patient experiences and lessen staff burden, health systems should leverage technological advancements such as intelligent automation. This would reduce tedious workflows and enable more patient- and staff-centered care experiences.

Robotic process automation in healthcare

Like other industries, healthcare involves many manual and repetitive processes that don't require much human judgment or decision-making. Regulatory and payer requirements, for instance, have created massive amounts of electronic paperwork across the industry. This is an area where robotic process automation (RPA) can minimize administrative burden. Hospitals and health systems, for example, can use automation to standardize reminder notifications that can help reduce no-shows and boost medication adherence. They can also send automated surveys to obtain more granular insights into their patients' wants and needs.

"It's software technology that manages other software technology," explained Chow. "It's ideal for repetitive and tedious tasks – things that a machine can do faster and more accurately."

Another driver for automation has been the exponential growth in data generated by medical records, clinical research, remote sensors and other Internet of Things devices. Managing all of this data in a timely manner is nearly impossible for humans, "especially in a way that results in the best real-time outcomes and experience for patients and providers," said Chow.

Until recently, the lack of interoperability among healthcare legacy applications has led to redundant and costly healthcare expenditures, suboptimal quality of care and a lack of collaboration across silos and stakeholders. "But the CURES Act, which has provisions against information blocking, will open the door for data liquidity among patients, providers and payers," Chow said. "It's going to change the game in terms of visibility and access to care."

It will also improve the quality of care delivery, Acker noted. "Having data available between points of intervention and synchronized across the entire patient journey will not only validate health outcomes, but also empower patients to make decisions and co-design health interventions with their providers," she said.

So far, Chow has seen the most success in applying RPA to revenue cycle management, where manual and error-prone processes such as prior authorizations and denials management are ripe for improvement. But he's also excited to see more organizations explore clinical use cases, especially as the latest iterations of RPA incorporate next-generation AI tools like machine learning and natural language processing.

Top RPA trends to watch in 2022

To that end, Chow described three RPA trends to watch in the coming year.

1. **Attended automation.** "Attended automation is like having a digital assistant at your side while you're working. This assistant has a repertoire of automation skills on tap so you, as a human being, are more able to do the things that only you can do," Chow explained. These automated skills might include a button to check a patient's coverage or book an

appointment. Chow noted that attended automation is well suited to healthcare because healthcare employees possess such specific expertise that automation will not replace the workforce, but rather, augment its productivity – critical with the current staffing shortage and signs of a recession.

2. **Interoperability.** An automation platform can interface with a healthcare system in various ways – from user interfaces to direct APIs – to create a holistic picture of what's happening in the organization. "We can now transfer data between systems, compare data sets, track the value of an intervention across silos, gather data for predictive analysis and identify risks ahead of time. That gives us a new perspective on what's happening with patients both inside and outside the traditional system," he said.

3. **24/7 monitoring:** Lastly, as a heavily regulated industry, healthcare requires monitoring for quality, safety, compliance and security at every level. Health systems have devoted significant human resources to running spot checks in these areas. However, automation bots can monitor environments 24/7 to analyze specific user actions and to enforce protocols if designed to do so. "In one case, a bot generated a highly detailed audit report within hours in response to a surprise regulatory visit, which was of great value to the organization," Chow said. "We're seeing more interest in this kind of automation."

A human-centric approach

Considering these trends in automation and other emerging technologies, Acker again remarked on the opportunity for systemic-level change: "We need responsible AI frameworks to embed equitable data and technology into design structures and experience strategies. No technology is a solution in itself; technology enables a solution to fit a purpose. We must shift our incentives to focus on patients as people."

Chow echoed this human-centric approach to AI. While there are still a lot of pain points across the industry, current trends in innovation are equally vast and exciting. "I predict that automation will become part of the toolkit medical professionals use to increase their own value," he said. "It will free up providers to spend more time thinking about their patients as only they can – with empathy, human judgment and a unique clinical talent for complex problem-solving."

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