

Artificial Intelligence: A powerful differentiator in the consumer age of healthcare



Introduction

For patients and members, navigating the complex world of healthcare has higher stakes than ever before. High-deductible health plans paired with new entrants into the healthcare ecosystem have created a burgeoning marketplace that encourages patients and members to become careful consumers of the plans and providers they select.

At the same time, providers and payers feel mounting pressure to exceed expectations and maximize outcomes at every key moment in the healthcare journey. If they fail to do so, they run the risk of losing patients and revenue.

But, as the saying goes, pressure makes diamonds.

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The competitive landscape in healthcare has spurred massive AI innovation across nearly every aspect of the care continuum. In 2024 alone, AI healthcare companies have already received more than \$2.8 billion in investments. By year's end, that number is set to climb to \$11.1 billion – the highest level of AI investment since 2021.

This is good news for healthcare organizations looking to find their competitive edge in the modern market. The foundational AI tools are out there to build strategies that personalize care, manage chronic conditions, and support every patient step in between. But the key to standing out in this pressure-filled market lies in being able to identify where consumer expectations are headed next.



AI is poised to unlock patient-centric healthcare innovation

Healthcare is quickly becoming a story of one. As patients increasingly seek to navigate their healthcare plans and bills on their own, their questions, challenges, and frustrations all become more personalized too. In the payer world, patients need to know how much a specific procedure will cost them on their plan, and whether it will be classified as an inpatient or outpatient procedure. In the provider world, they need to search for the best doctors, keep track of different appointments, and remember to take their daily medications.

That is where data, analytics, and AI come in. At the center of the healthcare technology revolution, emerging AI-enabled use cases can help to create hybrid care structures that empower patients to bring their healthcare plans with them anywhere, anytime.



The healthcare industry is currently sitting on 30% of the world's data. When harnessed successfully, this data helps to support the modern decentralized healthcare landscape—bringing the necessary personalization and information patients need to navigate complexity.

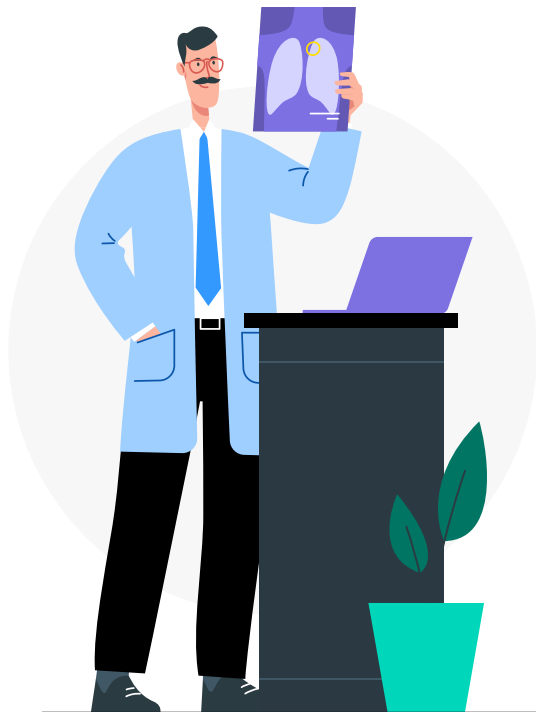
Across the care continuum, new data strategies are empowering healthcare organizations to erase these complexities and replace them with streamlined, patient-first solutions, including:

- Screening patients
- Executing patient intake and triage
- Diagnosing and imaging
- Preventative care and condition management
- And so much more...

As patients continue to take on more of the burden to manage their own care, these emerging practices offer a valuable opportunity for providers and payers to support their patients and win long-term loyalty.

The Limitless Potential of Data and AI in Healthcare

So, what do these data-driven strategies look like in practice? Let's take a look at four anecdotes that offer a glimpse of data and AI's potential in patient-centric healthcare. In each case, payers and providers went above and beyond to predict the needs of their patients and align themselves with the outcomes their patients desire most.



01

Condition Diagnosis and Early Detection

From breast cancer to kidney injuries, AI is helping some leading healthcare providers to activate at-risk groups, and both track and treat their health over time. For example, while most providers have EMR systems that assist in recommending closer monitoring for patients who meet a certain age designation or family history, mammograms often run a risk of producing a false positive. By integrating additional data related to hormones, genetics, and even breast density, diagnostic AI tools can help reach a verdict faster and with greater accuracy – reducing the need for unnecessary biopsies.

At TTEC Digital, we're also helping our clients think about patient activation. By parsing patient data throughout your EMR, our AI-enabled screening solutions can find patients who are at greater risk for all sorts of conditions – including colorectal cancer and breast cancer.

02

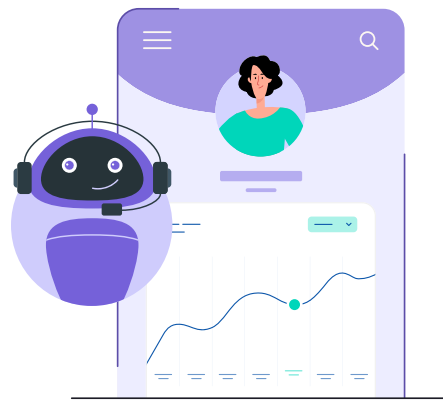
Member/Patient Service and Support

One of the biggest challenges patients face as they set out to navigate the healthcare market on their own stems from a lack of understanding. And who can blame them? Deductibles, covered services, and care options all bring considerable complexity with them.

The logical answer to this challenge might be to increase investment in the call center. But with any new call center investments comes a new drain on your organization's cost efficiency. Not to mention it fails to meet a growing segment of your patient population's desire to engage in self-directed care.

In the retail sector, brands are already using generative AI to fill this gap. Healthcare organizations are next. In fact, AI virtual agents are already helping some leading payers assess member bills, enroll prospects, and explain benefits and out-of-pocket costs. At each interaction point, these bots are able to pull up personalized member data and use natural language processing (NLP) to identify keywords, delivering sought-after, personalized answers. Not only do conversational AI bots provide answers to

critical questions 24/7/365, but they also help reduce call handle times and other big contact center costs. In the provider world, virtual nursing assistants can provide the same quick, efficient answers – cutting down on visit copays and ensuring consistent patient communication between visits.



03

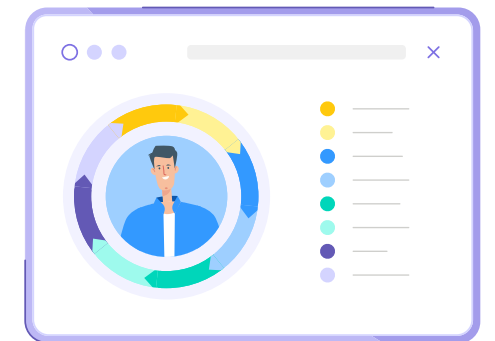
Health Program Adherence

Once diagnosed, many patients routinely struggle to keep up with their new chronic care management plans. Across the healthcare landscape, lapses in program adherence result in over 125,000 deaths a year and cost the healthcare system \$100 billion to \$300 billion as patients turn to emergency departments and hospital visits when their condition worsens.

AI-enabled patient engagement represents one way providers are trying to keep patients engaged in their plans. Meanwhile, other organizations are using personalized apps and gamification to help patients complete their care regimen and tick each box on their healthcare to-do list.

TTEC Digital is helping at-risk patients re-engage with the healthcare system after noted lapses in their care plan. For example, patients with hypertension or Type 2 Diabetes who meet specific segmentation parameters are notified to schedule a new appointment or sent a reminder to refill an outstanding prescription.

In all these cases, organizations must unify data from their electronic health records and other core systems, and then enrich that data with the essential contact information and social determinants of health to create a more complete 360-degree view of patients.



04 Promoting Expedient Care

What about when the unexpected happens? Even in the emergency room, where each patient encounter is seemingly random and unpredictable, AI is helping forward-thinking ER departments predict and prepare for uncharted territory.

At Johns Hopkins Hospital, predictive AI techniques are helping to improve the efficiency of patient operational flow. By calculating peak times of day and peak times throughout the year, as well as closely monitoring patient admittance and length of stay, the team at [Johns Hopkins](#) is better predicting when beds will open up and adjusting staffing levels to meet patient needs. Thanks to the hospital's AI program, the ER is now admitting patients to beds 38% faster than before. This has resulted in an increase in ER revenue by \$16 million – without a need for more beds.

Across the broader provider ecosystem, AI is also shifting some of the intake burden from clinical teams. Virtual assistants can take on some of the initial hospital documentation, triage, and note taking – freeing nurses, medical assistants, and other clinical staff to focus on high-touch patient care.

Turning Possibility into Practice

A common myth in healthcare is that AI solutions are only for the eCommerce giants or healthcare providers and payers with elaborate in-house IT and data teams.

The truth is healthcare organizations don't need limitless resources to drive powerful data-driven changes throughout their organization. More importantly, they don't have to undertake these challenges alone.

In reality, the growing competition for patients and members means that healthcare organizations can't afford not to explore AI

















As personalization in healthcare continues to grow, it will continue to become the expectation from patients who have no shortage of providers and payers to choose from.

At TTEC Digital, our team of data scientists and CX strategists bring decades of patient and member engagement experience to every interaction – supporting key business objectives with the right data and AI tools and solutions to grow patient loyalty, boost patient satisfaction, and exceed your bottom-line goals.

THE AI VALUE CHAIN:

Healthcare Payor

Here's how artificial intelligence use cases spanning automation, engagement, and insights can deliver member experience value across a healthcare payor organization.

Department	Automation Use Cases	Engagement Use Cases	Insights Use Cases
 Enrollment	<ul style="list-style-type: none"> Application Completion Analysis  Eligibility Verification 	<ul style="list-style-type: none"> Product & Plan Infobot  	<ul style="list-style-type: none"> Open Enrollment Deep-dive Redetermination Analysis
 Member Management	<ul style="list-style-type: none"> Member Profile Updates Appointment Scheduling 	<ul style="list-style-type: none"> Coverage Inquiry Chatbot  	<ul style="list-style-type: none"> Churn & Turnover Propensity Plan Usage Analytics  ML-enabled Risk & Quality Scoring 
 Claims Processing	<ul style="list-style-type: none"> Coding & Processing Evaluation  	<ul style="list-style-type: none"> Claims Q&A  	<ul style="list-style-type: none"> Claims Adjudication Process Diagnostics  Coding & Billing Analysis  Financial Planning Reporting
 Provider Network Management	<ul style="list-style-type: none"> Provider Evaluation & Selection 	<ul style="list-style-type: none"> Provider Engagement Bot  	<ul style="list-style-type: none"> Provider Performance Dashboards Network Optimization for Cost & Quality
 Billing and Payment	<ul style="list-style-type: none"> Pre-generated bills  	<ul style="list-style-type: none"> Payment Fulfillment Chatbot 	<ul style="list-style-type: none"> Billing Cycles Evaluation Payment Propensity Modeling Outstanding Payments Analytics

 Includes Generative AI

We Can Help

Whether you need an out-of-the-box patient activation solution, new omnichannel solutions to better engage members in their preferred channels, or something in between, we have the right strategies and technologies to turn possibility into reality.

Learn more about how TTEC Digital can help elevate your organization's data practices at ttecdigital.com.

[Learn More](#)



About TTEC Digital

TTEC Digital is a global leader in customer experience orchestration, combining technology and empathy at the point of conversation. With decades of innovation experience across the world's leading contact center technology platforms – plus in-house expertise in CX strategy, data and analytics, AI and more – TTEC Digital delivers an unmatched skillset for organizations looking to forge deeper customer relationships and drive better business outcomes. Learn more at ttecdigital.com.