

# AI Helps Streamline Some Health Care Tasks, Prompts Caution With Others



February 8, 2024

Recently it's been difficult to underestimate artificial intelligence's (AI) reach across health care entities such as specialty pharmacies, infusion providers and pharma companies. While AI has helped streamline many processes, its ultimate impact may be debatable at this point, and caution in certain areas is warranted, according to some industry experts.

"AI-enabled solutions have transformed the specialty pharmacy and home infusion industries," contends Mesfin Tegenu, CEO and chairman of RxParadigm, Inc. He notes that AI's subset of machine learning (ML) uses algorithms to find patterns and make predictions, leading to streamlined operations, better patient care and optimized resource allocations, all of which have the potential to result in cost savings.

"There is no doubt that AI can be used to increase operational efficiency," agrees Winston Wong, Pharm.D., president of W-Squared Group. "However, the logic of AI is only as good as its programmers teaching the system. We still need the human intervention, if only to ensure that AI is used ethically and responsibly."

"In specialty pharmacy, automation through AI facilitates tasks like prior authorization, benefit contract reviews and claim submissions," Tegenu points out. "AI can also analyze data to help identify fraud and abuse."

PBMs also are using AI to review contracts and their amendments to "reduce review time, identify key elements within the contract language and index them appropriately, and organize contracts for mining," notes Haita Makanji, Pharm.D., vice president of clinical strategy and innovation for Prime/Magellan Rx.

But AI's use in the administration of authorization programs also may pose challenges, says Wong, who points to

the class action lawsuit that UnitedHealth Group is facing alleging that an algorithm is incorrectly denying seniors coverage for care under Medicare Advantage plans. Groups also have made similar charges against The Cigna Group.

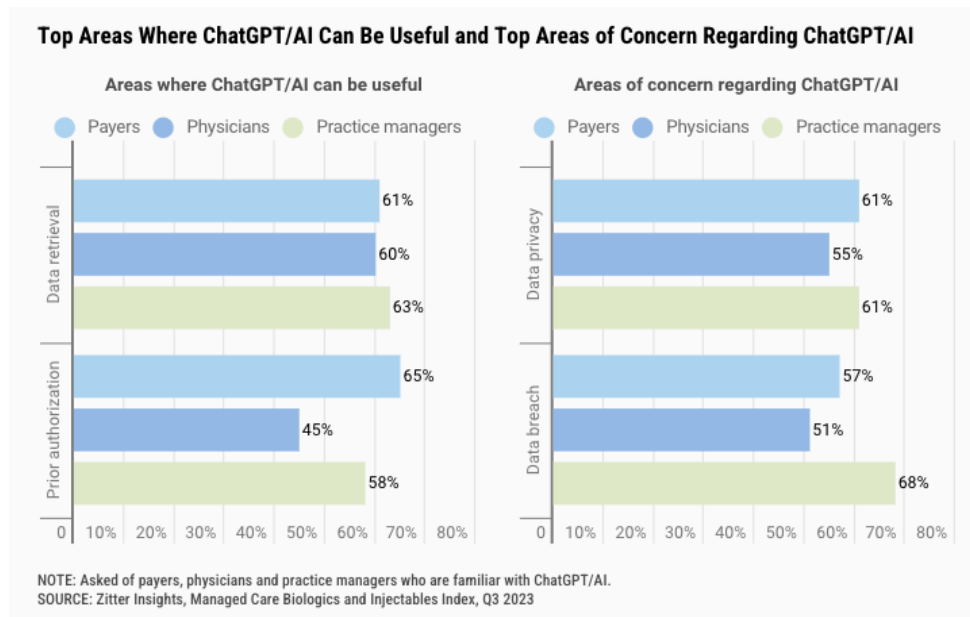
Makanji echoes that point. "The adoption of AI in health care has been met with mixed feedback. While AI-enabled solutions might be helpful in decision making around diagnosis and treatment or in patient logistics, there has already been negative publicity and legal action related to the use of AI in utilization management."

"In the home infusion industry, technology automates manual processes, saving time and resources," Tegenu tells AIS Health, a division of MMIT. "AI-powered tools can also enable remote monitoring of patients' vital signs, medication adherence and adverse effects, which can allow for timely interventions if an issue arises. AI algorithms can also analyze vast amounts of data to create personalized treatment plans, which can lead to improved patient outcomes. AI is evolving rapidly and has great potential to improve patient outcomes and reduce health care costs."

According to Makanji, ML "can maximize infusion center capacity, and this may translate to the home infusion site of service as well."

For the Managed Care Biologics & Injectables Index: Q3 2023, from Aug. 13, 2023, to Sept. 29, 2023, Zitter Insights polled 35 commercial payers covering 117.7 million lives, 103 physicians and 83 practice managers about their familiarity with Open AI's ChatGPT and AI tools in general.

Among the respondents, 33 payers with 115.9 million commercial lives, 77 physicians and 59 practice managers said that they are familiar with ChatGPT/AI. Those respondents ranked data retrieval and prior authorization as the top potentially useful areas for them, while data privacy and data breaches were flagged as the areas of most concern (see chart).



Zitter Insights also is a division of MMIT.

Among the three stakeholder groups, payers reported having the most familiarity with ChatGPT, with physicians having the least amount. And while almost two-thirds of commercial payers said they are having preliminary discussions about implementing ChatGPT or similar AI tools, less than one-quarter said they are actively researching and implementing them.

AI-enabled solutions can assess large amounts of patients and help providers identify potential issues with patient care, notes Andy Szcotka, Pharm.D, chief pharmacy officer at AscellaHealth. "The key is that AI products provide another tool for the specialty and home infusion care team to provide enhanced patient care and a better health care experience for the patient and physician. Potential time savings for the care team can be directed towards the patient and helping ensure a positive health outcome. AI is not a replacement for a clinician but rather an additional decision aid and tool to enhance the patient care experience and positively impact the desired results."

Szczotka also agrees that medication management is a key area for AI.

“These clinician-driven algorithms can support specialty and home infusion pharmacists assist with the right drug and dosage, [and] avoid drug interactions and potential adverse events proactively,” he explains. “By assisting with the pharmacy workflow and patient compliance, this can assist with lowering administrative burden and frees the clinical care team on direct patient care activities and monitoring.”

## AI Is ‘Game Changer In Pharma’

Pharma companies, however, may be further along in their use of and comfortability with AI.

For many reasons, AI “is a game changer in pharma,” asserts Dinesh Kabaleeswaran, senior vice president of consulting and advisory services for MMIT. “In a recent survey conducted by MMIT, more than two-thirds of commercial market access personas have indicated that their organizations are leveraging AI for several use cases. From a commercial standpoint, [AstraZeneca’s] initiative to identify disease risks through unstructured patient notes by employing AI and NLP [natural language processing] could pave the way for greater innovation and better survival rate outcomes. One of the more common developments that we continue to hear more about is integrating AI with patient communication and disease management strategies.”

Indeed, multiple respondents to the Zitter Insights survey cited disease and drug management as areas in which they are actively researching and/or implementing AI.

Even before the commercialization phase, AI is having an impact in earlier stages of pharma development. Over the past year, “we observed significant traction in the role of AI in advancing drug discovery and development,” says Namrita Negi, head of the Life Sciences Knowledge Center at Deloitte Consulting LLP. “Big Tech companies made significant inroads in this space through investing, collaborating and introducing services for generative AI-based drug discovery, advancing their AI-driven molecular modeling capabilities, hence promising breakthroughs in understanding disease pathways, drug design and genomics.”

Negi adds that “another key milestone for the industry in 2023 was when the first drug discovered and designed with generative AI entered Phase II trials”: Insilico Medicine’s INS018\_055, which is being assessed in idiopathic pulmonary fibrosis.

AI has been a potent tool in “drug discovery, development, manufacturing, personalization of drug therapy and drug safety through implementation of AI tools throughout the discovery process and supplemented applications of AI in nanotechnology-based products,” points out Makanji.

Elaborates Rumiana Tenchov, Ph.D., D.Sc., an information scientist at CAS, a division of the American Chemical Society, “AI can predict structure-function relationships for small-molecule drugs, identify targets and screen candidates by conducting molecular dynamics simulations. Similarly, it can predict protein structure and function to identify new therapeutic candidates.”

This expertise, she says, can mean “more therapies at lower costs. Pharmaceutical and biotechnology companies make large investments in developing AI capabilities, and companies like Alphabet and Nvidia have expanded into drug research. Traditional drug discovery is a notoriously time-consuming and expensive process, but AI tools are revolutionizing virtually every step of the drug discovery process, offering substantial potential to reshape the pace and finances of the industry.”

When it comes to identifying potential targets, AI can be trained to use large datasets in order to “understand the biological mechanisms of diseases and to identify novel proteins and/or genes that can be targeted to counteract those diseases,” Tenchov tells AIS Health. “Combined with systems like AlphaFold, AI can proceed further by predicting the 3D structures of targets and speed up the design of appropriate drugs that bind to them.”

Researchers can also forgo traditional chemistry methods — and their costs — to physically test candidate drug compounds by instead using “high-fidelity molecular simulations that can be run entirely in silico,” she notes. In addition, certain systems can forecast important properties “such as toxicity, bioactivity and the physicochemical characteristics of molecules,” bypassing simulated testing of candidates.

“While traditional drug discovery has historically involved the screening of large libraries of candidate molecules,

AI is shifting this paradigm,” declares Tenchov. “Some systems are capable of generating promising and novel drug molecules entirely afresh.”

## Studies Identify Limitations

Once a drug is available, companies have used algorithms that drive search engine optimization (SEO) “to influence website and ad rankings to generate additional market and mindshare with providers and patients that influence market position of specialty products,” explains Makanji.

And while she notes that AI-powered voice assistants and chatbots can “answer common member questions at scale” for payers, some areas have seen mixed results, according to two recent articles in JAMA Oncology.

The first assessed large language model (LLM) chatbots’ use in providing treatment recommendations for breast, prostate and lung cancer adhering to National Comprehensive Cancer Network (NCCN) guidelines. Researchers found that all of the outputs that had a recommendation had at least one NCCN-adherent treatment, but more than one-third of the outputs also recommended at least one treatment that did not adhere to NCCN guidelines.

Study authors concluded that “clinicians should advise patients that LLM chatbots are not a reliable source of treatment information. Language learning models can pass the US Medical Licensing Examination, encode clinical knowledge, and provide diagnoses better than laypeople. However, the chatbot did not perform well at providing accurate cancer treatment recommendations.”

For the second study, researchers examined the information provided by four AI chatbots about the top five search queries for skin, lung, breast, colorectal and prostate cancers. While researchers assessed the responses’ quality as good and did not detect misinformation, they found that understandability of the responses was moderate, and actionability was poor.

Researchers concluded that the chatbots “generally produce accurate information for the top cancer-related search queries, but the responses are not readily actionable and are written at a college reading level. These limitations suggest that AI chatbots should be used supplementarily and not as a primary source for medical information.”

For more information on the Zitter Insights data, contact Jill Brown Kettler at [jkettler@mmitnetwork.com](mailto:jkettler@mmitnetwork.com). Contact Kabaleeswaran at [dkabaleeswaran@mmitnetwork.com](mailto:dkabaleeswaran@mmitnetwork.com), Makanji via Jenine Anderson at [jenine.anderson@primetherapeutics.com](mailto:jenine.anderson@primetherapeutics.com), Negi via Julie Landmesser at [jlandmesser@deloitte.com](mailto:jlandmesser@deloitte.com), Szczotka via Caroline Chambers at [cchambers@cpronline.com](mailto:cchambers@cpronline.com), Tegenu at [Mesfin.Tegenu@rxparadigm.com](mailto:Mesfin.Tegenu@rxparadigm.com), Tenchov via Zornitsa Ivanova at [Zlvanova@cas.org](mailto:Zlvanova@cas.org) and Wong at [w2sqgroup@gmail.com](mailto:w2sqgroup@gmail.com). Contact Mitchell via James Chisum at [james@millergeer.com](mailto:james@millergeer.com) and Roberson at [kendra.roberson@faegredrinker.com](mailto:kendra.roberson@faegredrinker.com).



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Angela has an extensive background of editing, reporting and writing for trade and consumer publications. She has written Radar on Specialty Pharmacy since she joined AIS Health in 2005 and has broad knowledge of the various issues at play within the space. She also has written for Spotlight on Market Access since its 2017 launch.