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CIO JOURNAL

# Generative AI Makes Headway in Healthcare

Providers are tapping ChatGPT technology to summarize patient visits, assist in research



The University of Pittsburgh Medical Center plans to roll out a generative artificial intelligence-based tool from Abridge AI that helps doctors cut down on the amount of time they spend on notes.

PHOTO: QUINN GLABICKI/REUTERS

By *Belle Lin* [Follow](#)

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Startups offering the same kind of artificial intelligence behind the viral chatbot ChatGPT are making inroads into hospitals and drug companies even as questions remain over the technology's accuracy.

Healthcare startups such as Pittsburgh-based Abridge AI Inc., whose product helps doctors write notes after seeing their patients, and San Francisco-based Syntegra Inc., which uses generative AI to create realistic copies of patient data for research, say they have applied generative

artificial intelligence for the safest and most accurate current uses in healthcare.

Beyond those applications, healthcare providers are largely cautious about using generative AI for diagnosing patients or directly providing medical care. The technology's tendency to sometimes "hallucinate," or invent a response when it doesn't have sufficient information, makes it too risky for use in most patient care or medical settings, some healthcare experts say.

Abridge was founded in 2018 and Syntegra in 2019—both before recent headlines around ChatGPT, though the current hype is contributing to an uptick in interest, the companies said.

At the moment, one of the earliest large-scale uses of generative AI in healthcare is being rolled out at the University of Kansas Health System. The Kansas City-area medical centers are making Abridge's tool available to their over 2,000 doctors and other medical staff, said Chief Medical Informatics Officer Dr. Gregory Ator.

Abridge's platform uses generative AI to create summaries of medical conversations from recorded audio during patient visits. That helps doctors cut down on the amount of time they spend on notes, which can add up to over two hours a day, according to Dr. Ator.

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Dr. Robert Bart, chief medical information officer at the University of Pittsburgh Medical Center.

PHOTO: UNIVERSITY OF PITTSBURGH MEDICAL CENTER

For many hospital technology leaders, lessening physicians' documentation burden is a top priority, said Dr. Robert Bart, chief medical information officer at the University of Pittsburgh Medical Center. The Pittsburgh-based healthcare provider began increasing its use of Abridge after the onset of the pandemic, when it needed a way to digitize virtual primary-care conversations, he said.

UPMC will roll out Abridge's platform for its thousands of medical employees once the tool is integrated into electronic medical records systems like those from Epic Systems Corp. and Cerner Corp., Dr. Bart said. UPMC is a minority investor in Abridge.

Generative AI is named for its ability to produce humanlike prose, as well as other content like computer code and digital illustrations. The technology is already being added to business software from technology giants like Salesforce Inc. and Microsoft Corp., which in January said it planned to invest billions into OpenAI, the San Francisco-based maker of ChatGPT.

Abridge's platform relies on a combination of open-source machine-learning algorithms, large language models like those that power ChatGPT and its own homegrown models, said Abridge Chief Scientific Officer Zachary Lipton. Dr. Lipton said Abridge also uses those large language models to “reshape” generated prose and fine-tune them using its own data sets.



A screenshot of Abridge AI's product designed to summarize medical conversations from recorded audio during patient visits.

PHOTO: ABRIDGE AI INC.

Other startups like Syntegra are using generative AI to create so-called synthetic data, or fake versions of patient records that maintain the properties of the original, said founder and Chief Executive Dr. Michael Lesh. While synthetic data's use in healthcare and medical research isn't completely new, Dr. Lesh said Syntegra was the first to apply generative AI to create synthetic medical data nearly four years ago.

Syntegra's technology is being tested by Janssen Pharmaceutical Cos., a drug company owned by healthcare giant Johnson & Johnson. Sebastian Kloss, a real-world evidence research leader at Janssen, said Syntegra's synthetic data isn't subject to the same European privacy laws as real

patient records, allowing the Beerse, Belgium-based company to access that data and answer a research question in one month rather than six.

The synthetic data has been validated by Janssen's data scientists against real data, and will be particularly useful for researching less common diseases, where it is harder to gather sufficient patient data, Mr. Kloss said.

Generally, assisted documentation and synthetic data are considered lower stakes in terms of applying generative AI in healthcare because they have a less direct impact on patients, said Jeff Cribbs, an analyst covering healthcare technology at market research and consulting firm Gartner Inc. But there could one day be dramatic potential for the technology to change the way people are diagnosed and treated for disease, Mr. Cribbs said.

For instance, analysts say medical diagnosis can be greatly assisted with AI, which can trawl through vast amounts of medical literature and data. Palo Alto, Calif.-based startup Atropos Health Inc., which was founded in 2019, is using a different form of AI to help doctors answer clinical questions.

Generative AI applications like ChatGPT aren't currently suited to helping clinicians treat patients because they pull from existing medical and popular literature to answer clinical questions, and therefore aren't accurate, said Atropos co-founder and Chief Executive Dr. Brigham Hyde. On the other hand, Atropos pulls from millions of anonymized patient records from sources such as a healthcare provider's cloud-based patient records to produce observational research, Dr. Hyde said. Before being shared with doctors, its results are reviewed by the startup's medical director, he said.

Looming over the success of any AI-focused healthcare startup is what is widely considered the failure of International Business Machines Corp.'s Watson AI system. IBM once boasted that Watson could one day find a cure for cancer. No published research has yet to show that Watson improved patient outcomes, and IBM has since abandoned all applications of Watson for healthcare.

“Watson just picked really complicated problems,” Gartner’s Mr. Cribbs said. The difference, now, is that the AI and healthcare communities have become much better at determining the specific questions machine learning is best equipped to answer, and have improved the algorithms, which are trained on an ever-growing body of medical literature and patient data.

Yet those future uses of generative AI, such as for disease diagnosis, are still very far off, according to UPMC’s Dr. Bart. He said the technology is likely to very quickly improve operational processes in healthcare such as patient scheduling and flow—which have been long overdue for technological upgrades—but ChatGPT, at the moment, is still “a fancy toy” for diagnosis.

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