WHITE PAPER

Healthcare Providers Zero in on Ambient Listening, The Next Evolution of Artificial Intelligence

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Healthcare providers zero in on ambient listening, the next evolution of artificial intelligence

Because not all ambient AI options are created equal, providers need to do their homework before jumping into the fray

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Artificial intelligence (AI) is poised to help us all reimagine the world of work. AI is expected to transform the healthcare industry as well. Such conclusions are easy to make simply by perusing headlines across the countless media outlets that have recently covered the undeniable explosion of AI.

The big question for healthcare provider organizations is, What AI applications will come to the forefront in the here and now? One top answer: ambient listening AI. Indeed, as prognosticators are making predictions about the future of AI, many healthcare provider organizations are already using ambient AI to improve provider-patient interaction. In fact, a poll conducted by the Medical Group Management Association found that about 30% of medical groups report using ambient AI technology to transcribe speech or draft clinical notes.[1]

"The obvious goal and advantage of ambient listening is tied to the subjective history component of the encounter. Every doctor wants to capture all that data without a single click," said Bob Taylor, DO, Chief Product Strategist, Altera Digital Health. "And that is the beauty of ambient listening technology. If you think of all the ways providers did documentation before, it still took some cognitive effort on somebody's part."

Provider organizations, however, need to carefully step into the ambient listening waters. While there is a high level of interest surrounding ambient listening technology, healthcare leaders will need to cut through the fanfare surrounding the technology and zero in on implementing solutions that will truly deliver the desired benefits, according to Taylor.

Ambient AI: Defined

Ambient listening technology hears interactions between providers and patients and automatically generates clinical notes. It leverages ambient voice recognition technology to create a written summary that captures essential clinical details. By automatically capturing and transcribing patient–physician interactions, it alleviates the burden of manual documentation, enabling physicians to focus entirely on patient care. In addition, this technology enhances the accuracy of medical records, reduces administrative overhead, and ensures critical details are not overlooked. The result is a more efficient and effective consultation process, leading to faster diagnoses and treatments, and ultimately, improved patient outcomes.

For both patients and physicians, the introduction of ambient listening technology significantly boosts satisfaction levels. Patients feel more heard and valued as physicians engage with them directly, without the distraction of notetaking. This increased attention fosters stronger patient–physician relationships and enhances trust.

In addition, for physicians, the reduction in administrative tasks decreases burnout and increases job satisfaction. With more time and energy devoted to patient care and less to paperwork, physicians experience a renewed sense of purpose and fulfillment in their roles. The overall impact is a more positive and productive healthcare environment, benefiting all parties involved.

The next big thing in AI

The fact that ambient AI could help solve a long-standing challenge for physician practices has made it a technology of interest for providers. For many years, physicians have struggled to optimally communicate with patients while also producing sufficient and accurate clinical documentation of these interactions. Producing notes by hand or entering notes electronically places a significant burden on providers, while

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also making it difficult to make eye contact and effectively engage with patients.

Not surprisingly, providers feel the sting of clinical documentation as 92% of medical professionals find it to be a burden, while 73% believe it negatively impacts patient care, according to a survey published in The Journal of Graduate Medication Education.[3]

According to an article in the Journal of Medical Systems, the quality of clinical documentation is important as it affects the quality of patient care, patient safety and the number of medical errors. Clinical documentation is also increasingly used for other purposes, such as quality measurement, finance and research.

Additionally, regulatory requirements regarding documentation have increased. With so much hinging on clinical documentation, it's not surprising to learn that physicians are spending quite a bit of time on this task.

In recent years, various tools and techniques have been developed to increase documentation efficiency. These content importing technologies (CITs) include copy and paste functions (CPF) as well as automated data import from other parts of the electronic health record (EHR), templates, or macros. These tools result in multiple benefits, primarily faster documentation during patient visits. But there's a downside as well. For example, CIT has multiple risks. Incorrect insertion of data from other parts of the record or excessively long, bloated notes can distract a reader from key, essential facts and data.[2]

Using human scribes to capture provider-patient interactions is another alternative, albeit an expensive one that simply places the burden on another staff member. Having another human in the room can also negatively affect provider-patient interactions. In addition, while medical scribes can alleviate the documentation burden, scalability and workforce issues exist. Many physicians oversee scribes' work, which is a time-consuming task. And scribes, like providers, are prone to miss elements of the communication or to make mistakes as they document.

"The clinical decision support and quality reporting should become a natural byproduct of the provider's workflow. When the provider is documenting the visit, they shouldn't have to take extra steps to meet regulatory requirements. Instead, the AI should perform this for the provider,"

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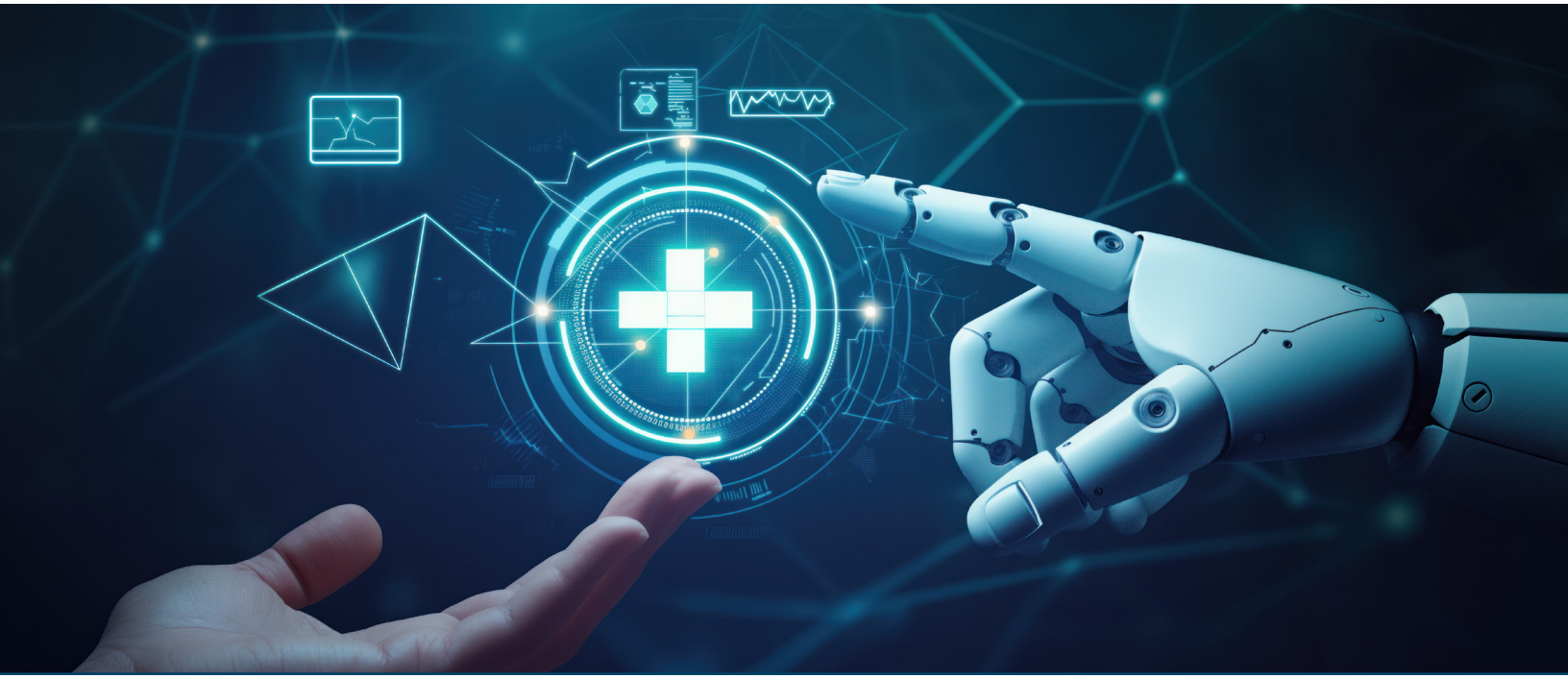
All of these methods, while capable of improving documentation, place some type of burden on humans.

Ambient listening technology, however, is poised to help with this clinical documentation conundrum. Ambient listening technology can help providers produce accurate and comprehensive clinical documentation while significantly reducing the cognitive burden associated with the task. When leveraging ambient AI, providers can expect to experience increased efficiency, improved medical record accuracy, better patient engagement, reduced physician burnout and better job satisfaction with the implementation of ambient listening AI.

Indeed, the technology is proving its mettle with early adopters. According to an article in NEJM Catalyst, when 3,442 physicians in one medical group used ambient AI to assist in more than 303,000 patient encounters across a wide array of medical specialties and locations, the results were favorable. Doctors cited the technology's "capability to facilitate more personal, meaningful and effective patient interactions and reduce the burden of after-hours clerical work." Patients also had positive feedback, noting improved interaction with physicians not spending time looking at computer screens.[4]

Seen one, seen them all?

As ambient listening technology is emerging as a viable entry into the world of AI for healthcare organizations, providers are being bombarded with promotions from various vendors.



"As a physician on Facebook, I literally get ads every day on my feed for ambient solutions," said Jeanne Armstrong, MD, Chief Medical Officer for TouchWorks® EHR, Altera Digital Health.

With this flurry of activity, providers need to compare options as not all ambient listening technologies are created equal. Healthcare leaders need to know what to look for and ultimately home in on the best ambient listening alternatives. Indeed, leaders should consider the following as they assess ambient AI listening options:

The freedom to use multiple documentation methods. To start, some ambient listening technology vendors offer provider organizations an all-or-nothing solution. However, it's important to allow physicians to have the option to choose between using ambient listening and other documentation methods—such as macro templates—to produce clinical notes. Narrating the entire physical exam in front of patients can be overtly laborious and time consuming.

"If I'm reciting my whole physical exam audibly, I'm saying, 'the patient's lungs are clear in auscultation throughout the left lung. Crackles are noted at the right base, et cetera.' Not all doctors are comfortable reciting all these details or medical jargon in front of the patient in all circumstances. It can make the visit feel longer and potentially awkward for both parties. Some patients might prefer a more streamlined interaction without hearing every detail of the physical exam," Armstrong said.

Therefore, having the ability to turn the ambient listening on and off is key. As such, providers could use ambient listening to produce documentation but could also supplement this with text macros, for example.

"This flexibility enables providers to choose ambient listening for specific patients or particular types of visits or documentation needs. Physicians can use a combination of methods in various situations to alleviate much of the click fatigue," Armstrong said. "This adaptable approach to data entry is highly appreciated by providers."

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The likelihood that the technology will play well with others. Ambient listening technology also becomes much more valuable when it can be implemented alongside other AI applications. For example, it's advantageous to leverage ambient listening in conjunction with AI that produces pre-rooming intelligence. Instead of manually culling through notes to determine what is happening with a patient, AI can answer questions such as: Has the patient been in the emergency department or urgent care? Is the patient due for a colonoscopy? Has the patient seen other specialists? Is there a lab result coming in? Having answers to such questions could help to improve the quality of the patient visit and help providers save an additional 15 minutes per patient per day.

The ability to go beyond merely producing text data. Ambient listening technology needs to convert recorded conversations into rich, discrete clinical data that can be leveraged for clinical decision support and quality reporting.

"The clinical decision support and quality reporting should become a natural byproduct of the provider's workflow. When the provider is documenting the visit, they shouldn't have to take extra steps to meet regulatory requirements. Instead, the AI should perform this for the provider," said George Chauvin, Solutions Director, Clinical UX, Altera Digital Health.

However, free text data entry is the output of most ambient listening solutions. "It may be structured in XML or JSON, where it has document sections, chief complaint or history of present illness. But it's just free text within each one of those document sections," Chauvin noted.

For example, when working with a patient with a family history of diabetes, the ambient listening solution might note that fact in the family history section of the clinical documentation, but it would not produce a SNOMED code.

"It's important to use a solution that marries the two: ambient listening technology and structured documentation so that the solution seamlessly supports quality reporting, decision support and error prevention," Chauvin added.

Altera's ambient AI, for example, meets this challenge by leveraging Medicomp's Quippe framework as the underlying structured documentation solution. Quippe provides a large library of 400,000+ clinical terms that are structured and codified.

"We take the ambient listening output and match it to Medicomp's Quippe terms using a large language model. This mapping step, combined with a comprehensive vocabulary, results in highly precise codified documentation. This integration is a game changer for improving clinical documentation efficiency," Armstrong concluded.

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