

HCA Healthcare Collaborates with Google Cloud to Bring Generative AI to Hospitals

AI technology to help improve workflows, reduce administrative burden and allow physicians and nurses to spend more time with patients

NASHVILLE, Tenn., and SUNNYVALE, Calif., Aug. 29, 2023 – HCA Healthcare, Inc. (NYSE:HCA), one of the nation’s leading healthcare providers, and Google Cloud today announced a new collaboration designed to use generative AI technology to improve workflows on time-consuming tasks such as clinical documentation, so physicians and nurses can focus more on patient care.

This expanded work with Google Cloud is part of a strategic partnership [announced](#) in 2021 that includes safeguards to protect patient privacy and the security of data. HCA Healthcare’s partnership with Google Cloud, as well as its multi-year implementation of MEDITECH Expanse in 2022, are key elements of HCA Healthcare’s work to accelerate its digital transformation.

“We’re on a mission to redesign the way care is delivered, letting clinicians focus on patient care, and using technology where it can best support doctors and nurses,” said Michael J. Schlosser, MD, MBA, FAANS, SVP, Care Transformation and Innovation, HCA Healthcare. “Generative AI and other new technologies are helping us transform the ways teams interact, create better workflows, and have the right team, at the right time, empowered with the information they need for our patients.”

As part of a pilot program that began early this year, approximately 75 emergency room physicians at four HCA Healthcare hospitals started using Google’s AI technology to quickly and more easily document key medical information from conversations during patient visits. It is part of a collaboration among HCA Healthcare, Google Cloud, and Augmedix, a healthcare technology company that specializes in ambient medical documentation. According to a 2022 study in *JAMA Internal Medicine*, 58% of physicians said time spent on documentation limits the amount of time they can spend with patients.

Physicians use an Augmedix app on a hands-free device to create accurate and timely medical notes from clinician-patient conversations. Augmedix’s proprietary platform then leverages natural language processing, along with Google Cloud’s generative AI technology and multi-party medical speech-to-text processing, to instantly convert the data into medical notes, which physicians review and finalize before they are transferred in real time to the hospital’s electronic health record (EHR).

Experts from HCA Healthcare’s Care Transformation and Innovation team (CT&I), along with the Google Cloud and Augmedix teams, continue to work closely with physicians to refine the solution, and HCA Healthcare plans to expand its use to more hospitals later this year. While the companies are in the process of collecting measurement data, physicians in the pilot program have reported strong overall satisfaction.

“HCA Healthcare is a leader in care delivery, and our expanded partnership has the potential to benefit the entire healthcare industry,” said Thomas Kurian, CEO, Google Cloud. “Bringing generative AI into solutions that support doctors and nurses can significantly improve their day-to-day experiences and help them focus on what matters most – caring for patients.”

Another opportunity HCA Healthcare has targeted for improvement through generative AI is patient handoffs between nurses. Typically, this important process is manual and time-consuming, and often provides varying levels of detail. HCA Healthcare’s CT&I team built a system using one of Google Cloud’s large language models (LLMs) that helps automatically generate handoff reports and is designed to promote continuity, consistency, patient safety, and clinical quality – while saving nurses significant time and maintaining human oversight.

Prompts were carefully designed to guide the LLM toward prioritized details, such as medication changes, laboratory results, vital sign fluctuations, patient concerns, and overall response to treatment. HCA Healthcare's team also shaped the model's outputs to make them intuitive and easy for nurses to read, comprehend, and act upon. During initial beta testing, HCA Healthcare collected nurse feedback to further refine the tool. Currently, the nurse handoff tool is undergoing continued testing at UCF Lake Nona Hospital. After seeing the prototype, nurses were pleased with the speed, accuracy and relevance of the draft reports the tool is generating and expressed high interest in putting the tool into practice.

Longer term, HCA Healthcare is exploring the use of Google's medically-tuned Med-PaLM 2 LLM to support caregivers.

"Having an LLM tailored for medical questions and content could be beneficial for certain critical use cases," said Dr. Schlosser. "We expect Med-PaLM 2 will be especially useful when we're asking complex medical questions that are grounded on scientific and medical knowledge, while looking for insights in complicated and unstructured medical texts."

Google Cloud's approach to data governance and privacy policies are designed for its customers retain control over their data. In healthcare settings, access and use of patient data is protected through the implementation of Google Cloud's reliable infrastructure and secure data storage that support HIPAA compliance, along with each customer's security, privacy controls, and processes. Google Cloud's responsible approach to generative AI also means customers have access to tools to directly tune large language models and to review model responses for biased or unvalidated content, teaching the model to avoid inappropriate outputs.

For more information, check out the Google Cloud blog on [A responsible path to generative AI in healthcare](#)

About Google Cloud

Google Cloud accelerates every organization's ability to digitally transform its business and industry. We deliver enterprise-grade solutions that leverage Google's cutting-edge technology, and tools that help developers build more sustainably. Customers in more than 200 countries and territories turn to Google Cloud as their trusted partner to enable growth and solve their most critical business problems.

About HCA Healthcare

Nashville-based HCA Healthcare is one of the nation's leading providers of healthcare services comprising 180 hospitals and approximately 2,300 ambulatory sites of care, including surgery centers, freestanding ERs, urgent care centers, and physician clinics, in 20 states and the United Kingdom. With its founding in 1968, HCA Healthcare created a new model for hospital care in the United States, using combined resources to strengthen hospitals, deliver patient-focused care and improve the practice of medicine. HCA Healthcare has conducted a number of clinical studies, including one that demonstrated that full-term delivery is healthier than early elective delivery of babies and another that identified a clinical protocol that can reduce bloodstream infections in ICU patients by 44%. HCA Healthcare is a learning health system that uses its more than 37 million annual patient encounters to advance science, improve patient care and save lives.

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