

Modern Healthcare

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Google, HCA strike multiyear cloud partnership

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The partnership will focus on developing artificial intelligence and data analytics tools to improve clinical care and workflow at HCA Healthcare, according to the for-profit hospital chain.

HCA Healthcare has entered into a multiyear partnership with Google's cloud arm, the for-profit hospital chain said Wednesday.

As part of the partnership, Google Cloud will build a data analytics platform for HCA designed to help the Nashville-based health system create tools that improve workflow and clinical care.

HCA declined to share financial details of the agreement.

HCA will work with Google Cloud's office of the chief technology officer and professional services team to develop artificial intelligence and data analytics tools, such as alerts that could be sent to clinicians' mobile devices so that they can respond to changes in a patient's condition more quickly, as well as improvements in non-clinical areas like supply chain and human resources.

HCA will use Google Cloud tools including the company's [healthcare API](#), or application programming interface, and BigQuery, a cloud data warehouse.

"The cloud can be an accelerant for innovation in health," said Thomas Kurian, Google Cloud's CEO, in a [statement](#).

The U.S. healthcare cloud computing market was valued at more than \$29 billion in 2020, according to a [report](#) from market research firm Global Market Insights, and is expected to reach \$79.3 billion by 2027, driven by growing adoption of digital tools and interest in data management tools that incorporate advanced analytics and store data securely.

HCA's contract is [just the latest example](#) of a health system partnering with a technology company for cloud services. A growing number of organizations in recent years have moved applications and data to the cloud—to servers managed by other companies off-site—to help save costs and develop innovative technologies.

Mayo Clinic in 2019 struck a 10-year contract with Google Cloud that involves data storage and innovation projects, leading the tech giant to [open an office in Rochester, Minn.](#), earlier this year to strengthen its relationship with the health system. Johns Hopkins Medicine last year [struck a five-year agreement](#) with Microsoft Corp.'s cloud arm to support the Baltimore-based healthcare organization's precision medicine program.

One of the most high-profile cloud deals in healthcare in recent years involved a partnership between St. Louis-based Ascension and Google. The agreement, which included a contract to move Ascension's patient data to Google Cloud, [drew public concern](#) in 2019 over patient privacy. Ascension has since [expanded a pilot](#) of an electronic health record tool from Google that it tested as part of the partnership.

Healthcare's shift to the cloud has encompassed two broad functions: migrating applications to the cloud, where they're hosted on off-premise servers, or storing data in the cloud so that it can be analyzed more easily and used as part of analytics tools.

"There are two phenomena going on," said Cynthia Burghard, a research director in value-based IT transformation strategies at IDC Health Insights, a division of market research firm International Data Corp.

While providers and payers were initially hesitant to move to the cloud in years past, citing concerns like privacy, security and reliability, over the past two years it's become more common for organizations to move applications such as EHR systems to the cloud, Burghard said. Deals that involve data, such as HCA's partnership with Google Cloud, have gained steam more recently.

Such partnerships have become more common over the past 12 to 18 months, according to Burghard.

Healthcare and life sciences companies had moved roughly 44% of business functions and 42% of IT systems to the cloud in 2020, up from 36% of business functions and 33% of IT systems to the cloud in 2018, according to a [report](#) from consulting and IT services firm Infosys, driven in part by the need to add more virtual care and remote work capabilities amid COVID-19.

Healthcare will likely continue to shift towards new cloud tools and deployments over the next two years, according to Jeff Kavanaugh, global head of Infosys' research and thought leadership arm.

In the wake of public pushback to Ascension's work with Google in 2019, healthcare experts suggested the controversy [reflected a lack of trust](#) the public had of Big Tech, which could pose challenges as tech companies moved into healthcare.

But Google and other tech giants have continued to make inroads in the industry.

"We'll have to work through a lot of these issues, concerns (and) opportunities" that Big Tech companies bring, said Pam Arlotto, CEO of healthcare consultancy Maestro Strategies. She noted recent announcements involving tech companies have emphasized privacy and security. HCA's [news release](#) reads, in part, "privacy and security will be guiding principles throughout this partnership."

As hospitals and health systems continue to enter into such partnerships, "it's really important that each organization that strikes these type of deals has very clear-cut goals (and) very distinct agreements with their partners about what you can and cannot do with your data," Arlotto said.

Google won't have access to identifiable patient data from HCA, said Dr. Jonathan Perlin, chief medical officer at HCA.

Perlin said he views the cloud as the next generation of storing electronic data—which has moved through floppy disks, hard drives and thumb drives.

"Today, most data are stored in the cloud," Perlin said. "It's really impossible to operate in healthcare without using cloud."

HCA works with multiple vendors to store data and applications in the cloud, including Microsoft Corp.'s Azure.

The partnership with Google Cloud goes beyond cloud storage, since HCA will be able to use Google Cloud's AI and analytics tools to analyze patient data and develop new algorithms.

The partnership in part grew out of a project HCA collaborated with Google Cloud on in April 2020—in the early days of the COVID-19 pandemic.

HCA last year launched a project [dubbed the COVID-19 National Response Portal](#), through which it shared COVID-19 data and encouraged other hospitals to do the same, in an effort to help track the spread of the pandemic. The portal, which continues to track COVID-19 cases and forecast hotspots, runs on Google Cloud and is built and operated by Sada Systems.

Perlin said HCA was impressed by Google Cloud's work on the project, including the team's "ability to turn things around in record time."

The new partnership will also build on HCA's previous work using technology and data to develop decision-support tools for its clinicians, according to HCA.

Perlin as an example highlighted a [sepsis-detection system](#) that clinical and IT staff at HCA developed in 2017, which is embedded in the system's EHR and evaluates patient data in real time. From 2017 to 2018, the alert system—dubbed Sepsis Prediction and Optimization of Therapy, or SPOT—helped reduce sepsis mortality by an additional 23% at HCA.

"We want SPOT for every patient, for every condition," Perlin said.

Inline Play

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