"Hello, Blue"—implementing a voice assistant to serve health plan members

When BlueCross BlueShield of Tennessee migrated to the cloud, the first app they built was a voice-activated digital assistant to help members ask questions and find doctors.

Maven Wave, an Atos company

A Google Cloud Premier Partner, Maven Wave is also Google Cloud's Services Partner of the Year for the third consecutive year. A multidisciplinary firm, Maven Wave is dedicated to helping enterprises make the transition to a digital environment.

BlueCross BlueShield of Tennessee

An independent, not-for-profit organization, BlueCross BlueShield (BSCS) of Tennessee is the largest health benefit plan company in Tennessee.

When the research and development (R&D) team at BCBS of Tennessee held its annual hackathon in 2017, the winning idea for new or revised services was to implement a digital voice assistant service to improve customer support for plan members.

The proposal was timely. As technological advances make voice assistants more sophisticated and useful, they are proliferating at breakneck speed and reshaping entire industries, including healthcare. "We knew we wanted to do voice, and we knew why we wanted to do voice, but what would this product look like?" recalls Patricia Reid, research consultant for BCBS of Tennessee's R&D team.

Driven by artificial intelligence and machine learning, digital assistants respond to voice commands and generate human speech to communicate with users. When the R&D team explored the development process, they discovered that to deliver the full experience, BCBS would need a cloud presence. So, with backing from their leadership, the organization spent much of the following year developing a cloud strategy and migrating to the cloud.

Because they had no in-house skills with digital voice assistants, the R&D team partnered with Maven Wave to build what would become the very first application in their new cloud infrastructure, kicking off the project with a design workshop to analyze the best path forward. "In order to define what we considered our use cases, we did the design thinking, which incorporated the analysis of how are members engaging with us," says Reid. "Are they engaging with us via phone? Are they engaging with us on the website? Are they engaging with us through other channels that we have out there?"

New channels for existing content

To narrow their focus from endless possible options, the team went directly to BCBS members, asking them how they would use a voice assistant if one were available. Based on those discussions, they selected the three most compelling use cases: wellness tips, FAQs, and finding a doctor.

To invoke the voice assistant, members would simply say, "Hello Blue." Google DialogFlow would facilitate the conversation from there. "You can see the power of DialogFlow," says Patrick Crotty, managing director for Maven Wave's healthcare practice, "particularly around the natural language processing component and how we're going to build very clear, very user-friendly, very intuitive designs."

The digital voice assistant would respond to "Hello Blue" with a question: "What would you like me to do?" If the member asked for a wellness tip, the system would read a randomly selected tip to the member and offer another, continuing to respond as long the member kept asking.

If the member asked a question, the voice assistant would draw the answer from the material posted to the Frequently Asked Questions section of the BCBS of Tennessee website—for example,"What is a deductible?" or "Can I travel with my health insurance?"

Having content in hand for the first two use cases greatly simplified their implementation. But the team still had to apply conversational design, an often overlooked step in the process of developing a voice assistant, to optimize the patient experience. "If you're just forklifting the data that's on your website and you're trying to use that paragraph format to reply to a member in a voice atmosphere environment, members will completely lose focus," explains Reid. "Even though the content is similar, the way that it's presented to members is a little different, or actually a lot different in conversational design."

Patrick Crotty, Managing Director for Maven Wave's healthcare practice

"Conversational design is a critical, often overlooked step in the process of developing a voice assistant."

More sophisticated service for members seeking help

The third use case, finding a doctor, would require even more sophisticated conversational interaction. After a series of questions, including a zip code prompt, the voice assistant would provide the names of the closest doctors who met the member's criteria. Since one of the most common reasons members call is to find a doctor, the team knew that the experience had to be well executed. "During this part of the process, it was incredibly important to just be very thoughtful," says Crotty. Reid agrees. "The Find Care use case was brand new content for us in the conversational format," she says, "but we also knew that it would be our biggest win with the voice assistant."

With Phase One complete, the joint team is reflecting on lessons learned and looking ahead to Phases Two and Three. For BCBS of Tennessee, the voice assistant technology required a completely new way to look at serving customers and creating content. "The opportunities are endless," says Reid. The COVID-19 pandemic provided an important test, proving that BCBS could quickly add content to assist members seeking trustworthy information.

In the next phase, the joint team plans to develop more personalized experiences for members that require them to sign-in to voice-enabled apps. Linking their accounts to the experience will enable members to complete tasks like ordering a new ID card. This will reduce the volume of common requests to the organization's call centers, benefitting both the organization and its members.

"Having that holistic point of view from a member perspective is obviously the Holy Grail and where we all ultimately want to go with this opportunity," says Crotty. "But given these unprecedented times, we think the opportunity to utilize bots in any environment, particularly for a provider and payer, is certainly of great value."

Patricia Reid,
Research Consultant,
BlueCross BlueShield
of Tennessee

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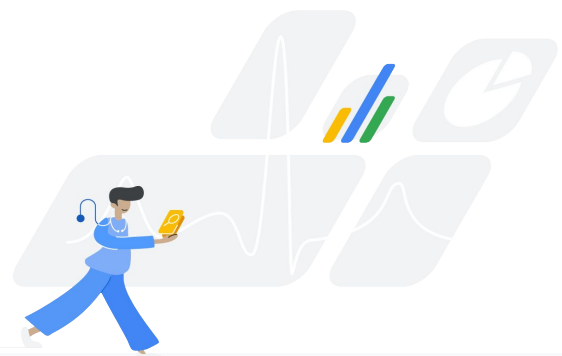
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