

Conversational assistants could be used to improve African American health around COVID-19

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University of Michigan researchers say employing a conversational assistant—think 'Hey, Siri,' or perhaps something less global like an

"Ask the Doc"—could be one way to narrow the gap in health disparities impacting the African American community, particularly around the current COVID-19 pandemic.

Lionel Robert, associate professor at the School of Information and senior author of a study in the journal *Digital Government: Research & Practice*, says a technological solution could keep economics, [social issues](#), mistrust and privacy concerns from blocking African Americans' access to care.

Can you briefly summarize the health disparities problem overall and as it relates to COVID-19.

African Americans suffer from at least two problems: 1) They are more likely to have comorbidities like type 2 diabetes and kidney disease, among others. This places African Americans at a higher risk of dying from COVID-19. 2) African Americans traditionally have had less access to health care and less trust in those that provide health care. As such, African Americans are less likely to have access to health care needed to quickly diagnose and treat COVID-19. This leads to being diagnosed much later, which also allows the spread of COVID-19 to continue among family and friends much longer. A lack of trust might also undermine their willingness to seek out health care.

Can you explain what conversational agents are, and the various forms they take?

Think of Amazon's Alexa and Apple's Siri as popular conversational agents. Most conversational agents that we use are nonverbal and communicate through text using natural language processing. For example, ITS (U-M's internet technology group) and the U-M Library each have their own conversational agents located on their sites to help

users. The core of what makes conversational agents is their ability to allow human users to engage in natural conversation with the agents as they would do with another human user. Alexa and Siri are much more powerful in that they can support conversations across a range of different topics, while the ITS conversational agent is narrowly designed to answer questions related only to ITS.

Why are these particularly helpful with the African American population?

Currently, in many cases they are not. This is because many conversational agents are not designed specifically with African Americans in mind. These conversational agents are not context specific to a particular set of ethnic users. In most cases like the ITS example this is not problematic. However, when it comes to innate conversations about one's health, conversational agents must be designed to understand and communicate in terminology familiar with the user. It should also be designed to address issues of distrust in the health care community. If designed properly, [conversational agents](#) could be a source of credibility information and advice.

Messaging is only as good as the ability to get it to those who need to hear or see it. How are CAs more visible to African Americans than other forms of communication?

The problem is they are not. In fact, they are in many ways the least visible to the African American community. This would need to be addressed by engaging with community stakeholders such as local government, community [health care](#) centers and places of worship like churches. So we clearly benefit from CAs to the African American

community but also fully acknowledge the barriers needed to overcome.

How can CAs be used to inform about COVID-19 specifically?

For example, an African American with type 2 diabetes could awake every morning and tell the conversational agent how he/she is feeling, perhaps give information such as temperature. Based on this information along with communitywide-available information (maybe there is a recent COVID-19 outbreak in the area), the conversational agent could recommend that the individual seek their doctor. The conversational agent could also be more specific and recommend that the individual go to the local COVID-19 testing site near their home and provide a location. The conversational agent could also help address issues of misinformation. For example, if the individual hears misinformation about COVID-19 and its treatment, that individual could go to their conversational agent to get accurate information.

More information: Junhan Kim et al. Bridging the Health Disparity of African Americans Through Conversational Agents, *Digital Government: Research and Practice* (2020). [DOI: 10.1145/3428122](https://doi.org/10.1145/3428122)

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