

Can a virtual assistant keep you healthy?

March 13 2019



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Artificial intelligence will take its first step into the healthy lifestyle sector as UniSA's new virtual assistant, 'Paola', is piloted in a world-first Mediterranean lifestyle and physical activity study this week.

The study aims to show how chatbot [technology](#) – Paola – can facilitate improved [health](#) and physical activity, while reducing [risk factors](#) for

cardiovascular disease including blood pressure and body weight.

The program is run solely by virtual assistant, Paola who will guide volunteers through a 12-week program where they will adopt a Mediterranean diet, increase their [physical activity](#), and interact with a custom-designed website.

Lead researchers, UniSA's Associate Professor Carol Maher and Dr. Karen Murphy say this is one of the first times that chatbot technology is used in [health research](#).

"Chatbots are increasingly appearing in service industries, but in most cases, they can only answer a limited set of common questions and require human steps to complete the conversation," Assoc Prof Maher says.

"Paola is different as she is not just a first-level response chatbot; she has the ability to learn and modify her responses, giving the potential to deliver an entire health program, without additional support from a dietitian or exercise professional."

Paola is built on [OutThought](#) technology, underpinned by [IBM Watson Virtual Assistant](#) which is renowned for its ability to accurately and easily interpret and train with human interactions. The virtual assistant technology has been further enhanced to bring a personal and natural feel to the way Paola converses, enabling her to refer to users by name and send them friendly reminders to complete their check ins.

The research presents a significant opportunity for emerging technology to be applied in the health domain, where Australia's health expenditure currently exceeds economic growth. [Australian Institute of Health and Welfare statistics report that Australia spent \\$180.7 billion on health in 2016-17](#), an equivalent of more than \$7400 per person.

The rise in health costs signals a need to drive better outcomes for patients and citizens, and by embracing new technologies – like [artificial intelligence](#) – researchers can help improve health outcomes while also potentially reducing costs.

Industry partner, Paul van der Linden, Director of OutThought and technology provider of Paola, says it has been exciting to work with UniSA researchers to custom-make a virtual assistant.

"Our expertise in technology and deep knowledge of its benefits and limitations have allowed us to create amazing virtual assistants like Paola," van der Linden says.

"But this is only part of what is needed; it has been the UniSA team, their passion and deep understanding of health research and the Mediterranean lifestyle, that has given Paola her unique personality.

"Together, we've created something great, which the whole team is hoping will successfully deliver UniSA's Mediterranean diet and exercise program."

A Mediterranean diet and lifestyle can offer enormous benefits in terms of longevity, health and well-being, but according to Assoc Prof Maher, these benefits come from following a particular eating pattern, as well as taking opportunities to be active throughout the day.

"Often people don't understand the specifics of a Mediterranean diet or how to adopt it into their lifestyle," Assoc Prof Maher says.

"To shift to a Mediterranean lifestyle pattern, people need detailed and personalised information, typically from a dietician or exercise physiologist, which is time-consuming and expensive.

"We hope Paola will offer people an alternative. She presents the potential for many more people to access and take advantage of healthy diet and [lifestyle](#) information, which we hope, will successfully support them to make long term changes to improving their health."

Provided by University of South Australia

Citation: Can a virtual assistant keep you healthy? (2019, March 13) retrieved 21 May 2024 from <https://medicalxpress.com/news/2019-03-virtual-healthy.html>

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