

# THE FUTURE OF DIABETES CARE IS AI-DRIVEN

As a significant chronic condition with no cure, diabetes often results in severe complications and even leads to nearly 7 million deaths per year. But patients who work with their health care providers to successfully manage the condition can live longer with a better quality of life.

That's where health and lifestyle apps can make a real impact. But with thousands already on the market, what will make another one stand out?

Two faculty members at the Bryan School of Business and Economics are considering that question. Dr. Hamid R. Nemati, professor, and Dr. Motahareh Bahar Pourbehzadi, assistant professor, in information systems and supply chain management partnered to develop an app called SMART Diabetes, which they believe offers a distinct difference.

"The most important factor in our SMART Diabetes app is the way it uses artificial intelligence (AI) to motivate patients to stay current and follow up with their health recommendations," Nemati says.

By monitoring a user's diet, medication, and activity goals, SMART Diabetes offers personalized "nudges" for lifestyle changes to improve symptoms. These nudges are based not only on the user's own health data but also their own beliefs and cognitive processes. For instance, one user may know that organic food is healthy, but that it's expensive – so for that particular individual, cost may be a hindrance to healthy eating. The app then crafts individualized messaging targeting that concern.

Other unique offerings include:

- Health recommendations made from both general medical knowledge and the patient's health data in two forms: their electronic health record and real-time wearables, such as Apple Watches or FitBits.
- Customizable video recommendations that appear as if they're coming from users' preferred coaches, such as a physician, their mother, or even themselves.
- A new approach called agentic AI. This allows computerized "agents" to develop expertise in specific areas of a patient's health and then interact with each other. For instance, the app's healthy eating agent collaborates with a sleep agent and an exercise agent. These "conversations" help AI learn, avoid mistakes, and facilitate better outcomes.
- A shared platform that both patients and medical providers can access.

Now in development, the app could be tested on patients by year's end and eventually adapted to other health conditions, Pourbehzadi says. "To our knowledge, no such app exists, so we're working really hard to be the first ones to put it out there."

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