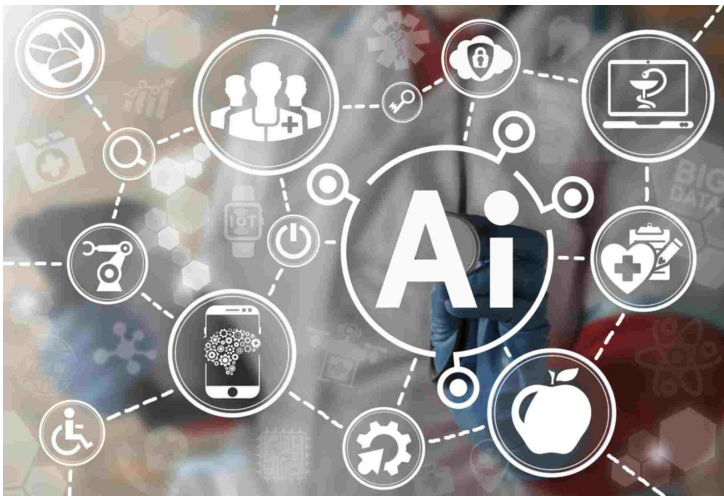# IBM Watson Health showcases technology developments for diabetes

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New mobile app from Medtronic, Sugar.IQ™, applies AI technology from IBM Watson Health to help people with diabetes make more informed decisions

IBM Watson Health announced highlights from its latest advancements in applying artificial intelligence (AI), machine learning and analytic technologies to address the data-driven obstacles of diabetes, as presented at the American Diabetes Association's (ADA) 78th Scientific Sessions.

Through IBM Watson Health's ongoing partnership with Medtronic, the companies announced the commercial availability of Sugar.IQ™ with Watson, an app that aims to give people insights to help manage their diabetes. IBM Watson Health also announced findings from three data presentations at ADA, including real-world data underscoring the value of machine learning and analytic tools in diabetes.

The average patient with diabetes has to make more than 180 decisions daily based on careful monitoring of their glucose, nutritional intake and activity level.1 The Sugar.IQ diabetes assistant works exclusively with the Guardian™ Connect Continuous Glucose Monitoring (CGM) system and continually analyzes glucose, insulin, food, and other data from past and present to give users a better understanding of how lifestyle choices, medications and multiple daily injections impact diabetes management.

Using Watson, the Sugar.IQ™ app gives people with diabetes powerful, personalized insights to help them make more informed decisions to better manage glucose levels and keep them in the target range.

At ADA, new data presented in an oral session by Medtronic, demonstrated the utility of Sugar.IQ in a real-world setting.

The study found that people with diabetes using the Sugar.IQ app spent 36 more minutes per day in healthy glucose range compared to before they used the app. This included 30 minutes less time in hyperglycemia (>180 mg/dL) and 6 minutes less time in hypoglycemia (<70 mg/dL). This represents more than 9 additional days in a year that a person with diabetes is spending in a healthy glucose range.

Watson Health also unveiled findings from two presentations at ADA that highlighted insights from real world evidence gleaned from IBM claims data.

Investigators from the ADA and IBM Watson Health presented a retrospective analysis in an oral presentation, which found a significant number of Type 2 diabetes (T2D) patients are not compliant with their medications after one year.

The study included data for 324,136 adults (mean age 55 years, 46% women) from the Truven Health MarketScan® Commercial and Medicare Supplemental Databases who were diagnosed with type 2 diabetes between 2013 and 2016.

After three months, 31% of patients had discontinued their diabetes medications altogether; by six months, the number increased to 44%, and by one year to 58% of patients had stopped treatment.

This study suggest interventions are needed to improve adherence and avoid gaps in therapy that can be associated with serious outcomes for patients.

Separately, a study conducted by scientists from the ADA and IBM Watson Health found that applying machine learning tools can identify potential therapeutic benefits of certain T2D medication classes by comparing health outcomes reported in IBM claims data .

This analysis, presented during a poster session, demonstrated that certain T2D medications classes are associated with fewer instances of cardiovascular events, including heart failure, heart attacks and strokes, demonstrating the power of machine learning techniques to help practitioners develop new insights that can positively affect patient care.

As part of IBM Watson Health's ongoing collaboration with ADA to leverage Watson-powered solutions to support the diabetes community, the two companies also demonstrated a new proof of concept (POC) tool at this year's Scientific Sessions leveraging Watson Multimedia Services.

The POC tool ingested 90 hours of video webcasts from more than 300 webcasts from the 2017 ADA Scientific Sessions and applied AI techniques to these videos, to make it easier for people to navigate video content from last year's Scientific Session and decrease the amount of time spent searching for answers to specific questions locked away in these videos.