

Journal of Medical Internet Research | Continuous Glucose Monitoring Type 2 Diabetes Control

"Continuous Glucose Monitoring With Low-Carbohydrate Nutritional Coaching to Improve Type 2 Diabetes Control: Randomized Quality Improvement Program"

TORONTO, CANADA, December 13, 2022 /EINPresswire.com/ -- JMIR Publications published "Continuous Glucose Monitoring With Low-Carbohydrate Nutritional Coaching to Improve Type 2 Diabetes Control: Randomized Quality Improvement Program" in the Journal of Medical Internet Research, which had the aim of comparing changes in HbA1c levels between patients with suboptimally controlled type 2 diabetes mellitus (T2DM) who were offered the opportunity to use an intermittently viewed continuous glucose monitor (CGM) and receive personalized low-carbohydrate nutrition counseling versus those who received usual care.



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"Type 2 diabetes mellitus (T2DM) is a leading cause of morbidity and mortality globally, with adverse health consequences largely related to hyperglycemia."

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Dr. Dina H Griauzde

Included participants ("individuals with HbA1c>7.5%...who were medically eligible for tighter glycemic control") were split into 2 groups: usual care-high risk (UC-HR) and enhanced care (EC)-HR. The primary outcome was the mean change in HbA1c levels from baseline to 12 months using an intention-to-treat difference-in-differences analysis comparing the EC-HR group with the UC-HR group. The authors also conducted follow-up semistructured interviews to understand the EC-HR participants' experiences with the intervention.

HbA1c decreased by 0.41% more for participants in the EC-HR group than those in the UC-HR from baseline to 12 months; however, only 61 of the 185 EC-HR participants engaged in the program. Among the EC-HR participants who wore CGMs, HbA1c was 1.1% lower at 12 months compared with baseline.

Dr. Dina H Griauzde, MSc, MD, from the VA Ann Arbor Healthcare System and the University of Michigan said, "type 2 diabetes mellitus (T2DM) is a leading cause of morbidity and mortality globally, with adverse health consequences largely related to hyperglycemia."

Unfortunately, despite clinical practice guideline recommendations, effective pharmacotherapy, and interventions to support patients and providers, up to 60% of patients with diagnosed T2DM are estimated to have HbA1c levels above the recommended targets. Multilevel barriers hinder optimal glycemic control, including those at the patient, provider, and health system levels. Such barriers may be exacerbated by the high costs of many T2DM medications, including insulin.

Novel strategies that can be sustained and scaled in diverse clinical settings are needed to help more patients with T2DM achieve the dual goals of glycemic control and reduced medication burden.

Dr. Griauzde and the research team concluded in their JMIR Publications Research Output that "...the use of CGM technology and personalized nutrition counseling focused on dietary carbohydrate restriction can help patients with suboptimally controlled T2DM to improve HbA1c levels without increasing antihyperglycemic medication use. As CGM technology evolves and carbohydrate restriction is increasingly accepted as a powerful tool to support T2DM self-management, this program may be a scalable and sustainable strategy to help and empower patients with T2DM to achieve glycemic control."

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