research spotlight

dexcom

Exploring the Impact of CGM on Perceived Control of Non-Intensive Insulin Treated Type 2 Diabetes: "I Liked Keeping My Line With as Few Spikes as Possible"

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Objective

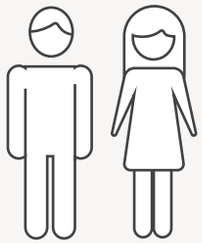
To understand how Dexcom CGM use relates to psychosocial benefits in patients with type 2 diabetes.

Study Outcomes Measured

Perceived control of diabetes management before Dexcom CGM initiation and after 3 months of CGM wear was measured*.

Perceived control is associated with confidence and motivation in regard to diabetes self care.

Participant Demographics



38
Participants

T2D

76% no insulin, 24% basal insulin (not fast acting)

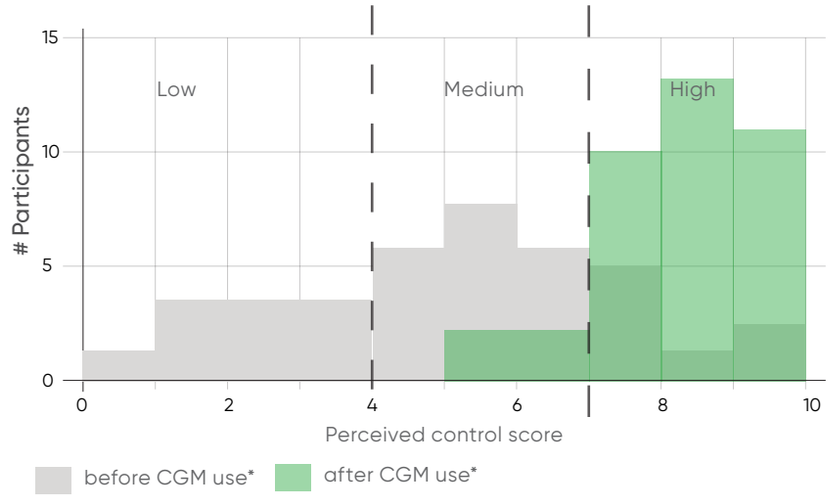
Wore Dexcom CGM for 3 months

Results

- Most participants (>90%) ended the study with high levels of perceived control (PC) of their diabetes*
- Perceived Control Low → High group decreased emotional impact of diabetes (BIPQ) and frequency of feeling down, depressed or hopeless (PHQ2)†
- Perceived Control Low → High & Medium → High groups improved self efficacy for managing diabetes

Qualitative data generated from a subsample of T2D participants (N=38) from a larger observational study[1].

Participants answered open-ended questions about their experiences using CGM including self-reported learnings and changes in behavior.



*self reported based on the Percieved Control scale (1-10)
† self reported based on the BIPQ (Brief Illness Perception Questionnaire) 0-80 scale ($p<0.05$)

1. MARGARET A. CRAWFORD, DANIEL R. CHERÑAVVSKY, KATHARINE BARNARD, XIAOHAN (ARIA) WANG, PAUL GENGE, KENNETH GREENAWALD, MICHELLE TRESSLER; 669-P: Lower Peak Glucose and Increased Time in Range (TIR) in a CGM-Wearing T2D Population Not Taking Fast-Acting Insulin Shows Value of Real Time–CGM (rtCGM) as a Behavior Change Tool. Diabetes 1 June 2022; 71 (Supplement_1): 669–P. https://doi.org/10.2337/db22-669-P

Results

7.6% to **6.8%** at follow up*

36% ↓ emotional burden at follow up‡

92% of patients completing the study **reported high levels of perceived control**† over their diabetes (without additional behavioral support) after using the G6 CGM

"I felt my mood was improved, because I felt I had a sense of control over my life and health. I could read [my CGM] anytime and make changes that immediately impacted me. Without the CGM, I have an idea about what I should do, but it's not the same. It isn't rewarding." - Female, age 43

"I felt I had better control, which gave me more confidence." - Male, 52 years old

"Prior to the study, I think I was in the anger stage of grief still. I felt it is unfair that I have diabetes… However during the study, having the real time glucose numbers, interrupted that thought pattern and I would reevaluate situations when I wanted to eat something that I knew would affect my blood glucose." -Female, age 37

KEY TAKEAWAYS

- **Perceived control is associated with confidence and motivation in regard to diabetes self-care**. After 3 months of Dexcom CGM wear, most participatns reported "high perceived control.[1]
- Dexcom CGM can lead to feelings of empowerment, emotional relief, and a heightened sense of diabetes management.[1]
- Dexcom CGM provides valuable insights even to well informed users.[1]
- In certain groups, wearing Dexcom CGM can decrease the emotional burden of diabetes.[1]

*Medium to High group (n=18) Standard deviation 0.7 (p<0.05).

† self reported based on the BIPQ (Brief Illness Perception Questionnaire) 0-80 scale (p<0.05) ‡ Low to High group (n=9) self reported based on the BIPQ (Brief Illness Perception Questionnaire) 0-80 scale (p<0.05).

1. MARGARET A. CRAWFORD, CHRISTIAN HICKS, PAUL GENGE, KENNETH GREENAWALD, MICHELLE TRESSLER, DANIEL R. CHERÑAVVSKY, HARSIMRAN SINGH; 677-P: Exploring the Impact of CGM on Perceived Control of Non-Intensive Insulin Treated Type 2 Diabetes–"I liked keeping my line with as few spikes as possible". Diabetes 20 June 2023; 72 (Supplement_1): 677–P. https://doi.org/10.2337/db23-677-P