

Effects of a 12-month Weight Management Program Integrated with Continuous Glucose Monitoring on Body Weight and Glycemic Control: A Randomized Controlled Trial in Patients with Type 2 Diabetes

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Introduction

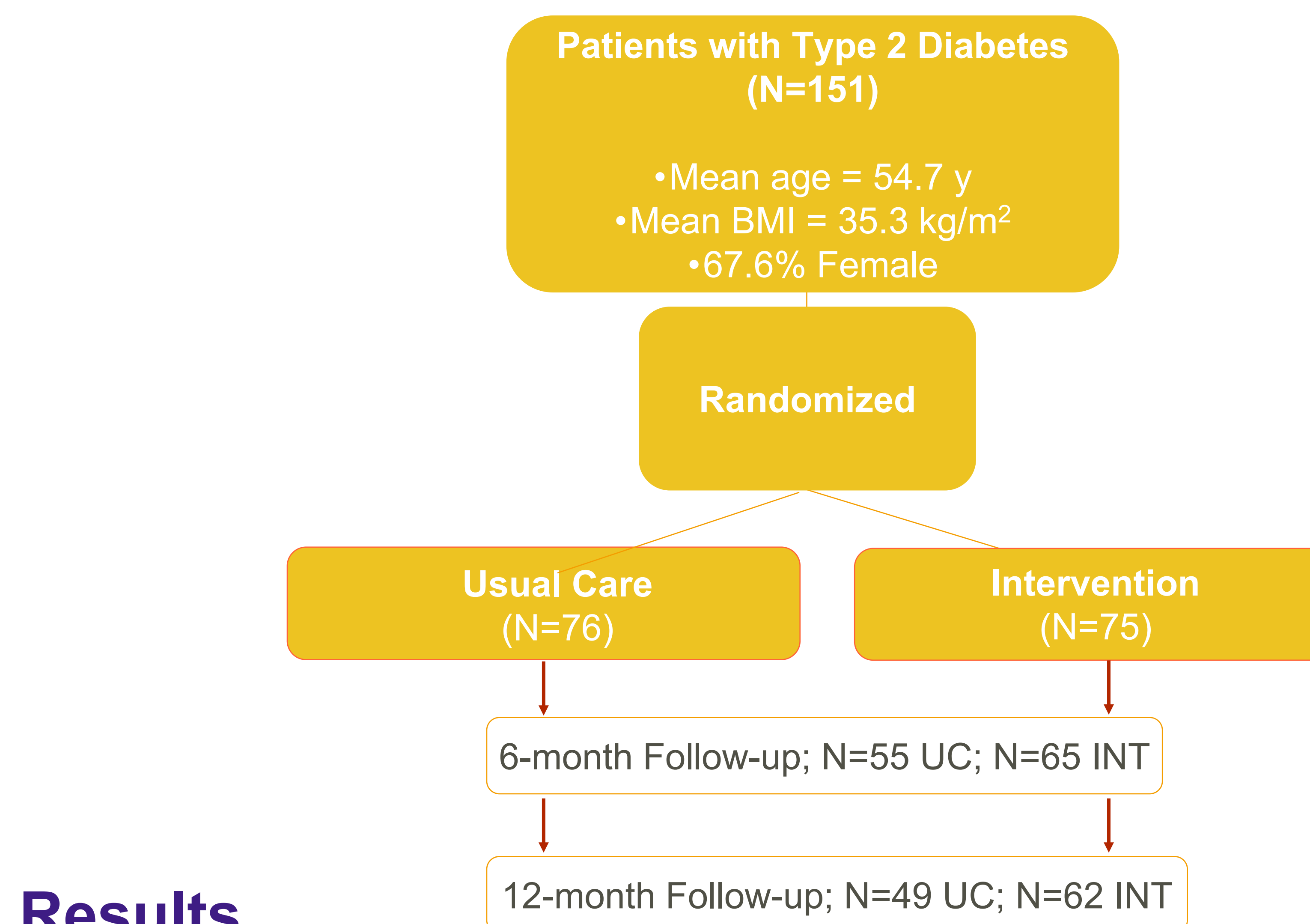
Clinical guidelines recommend weight loss for management of type 2 diabetes mellitus (T2DM) and the prevention of cardiovascular disease.¹ Commercial weight loss programs are more cost-effective and accessible than clinic-based modalities and have been shown to be effective for clinically significant weight loss in adults with additional improvements in glycemic control.² Continuous glucose monitoring (CGM) has emerged as an effective and popular tool for patients to track their glucose levels in real time and provide feedback to support behavior change.³

Aim

The objective was to test the effectiveness of integrating CGM into a behavioral weight management program to improve weight loss and glycemic control among adults with T2DM.

Methods

- Two-arm, three-site, 12-month randomized controlled trial of an innovative commercial weight management program compared to usual care in patients with T2DM.
- Intervention (INT): WeightWatchers Diabetes Program integrated with CGM (Abbott FreeStyle Libre 2)
- Usual Care (UC) materials based on recommendations of the American Diabetes Association for weight and one 50-minute virtual individual session of nutrition counseling with a registered dietitian.
- Outcomes included 6- and 12-month changes in HbA1c and body weight. The primary outcomes was change in HbA1c at 6 months.
- Randomization was stratified by GLP1-RA use.
- Analyses were conducted to assess treatment effects at 6 and 12 months using a repeated measures mixed model, assuming data were missing at random. All available data were included in the model, which employed the intent-to-treat principle.



Results

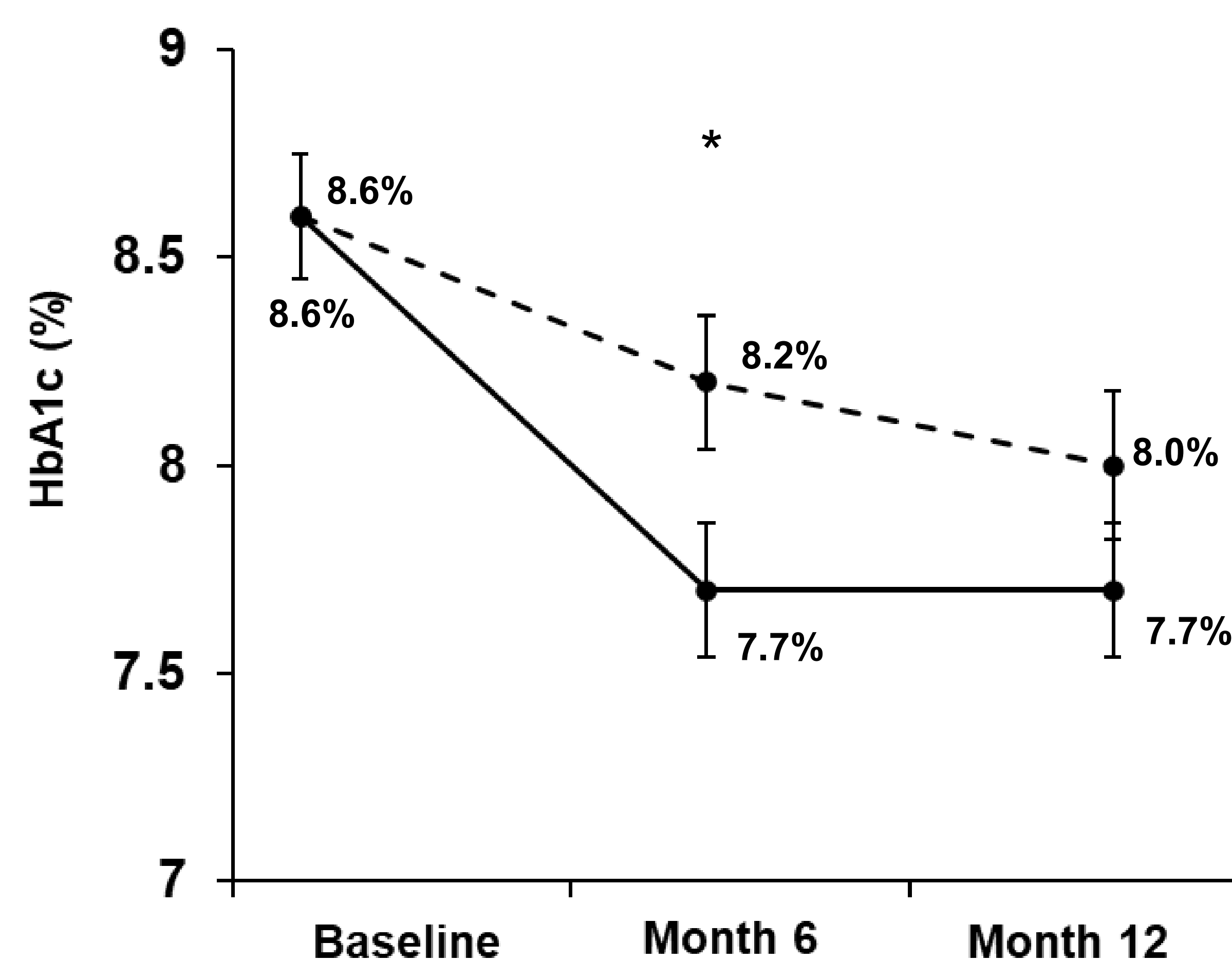


Figure 1. Estimated mean changes in HbA1c over time by group. Error bars indicate standard errors. Solid lines represent the intervention group and dotted lines represent the usual care group. Statistical models included age, sex, race and education as covariates. *statistically significant difference between groups.

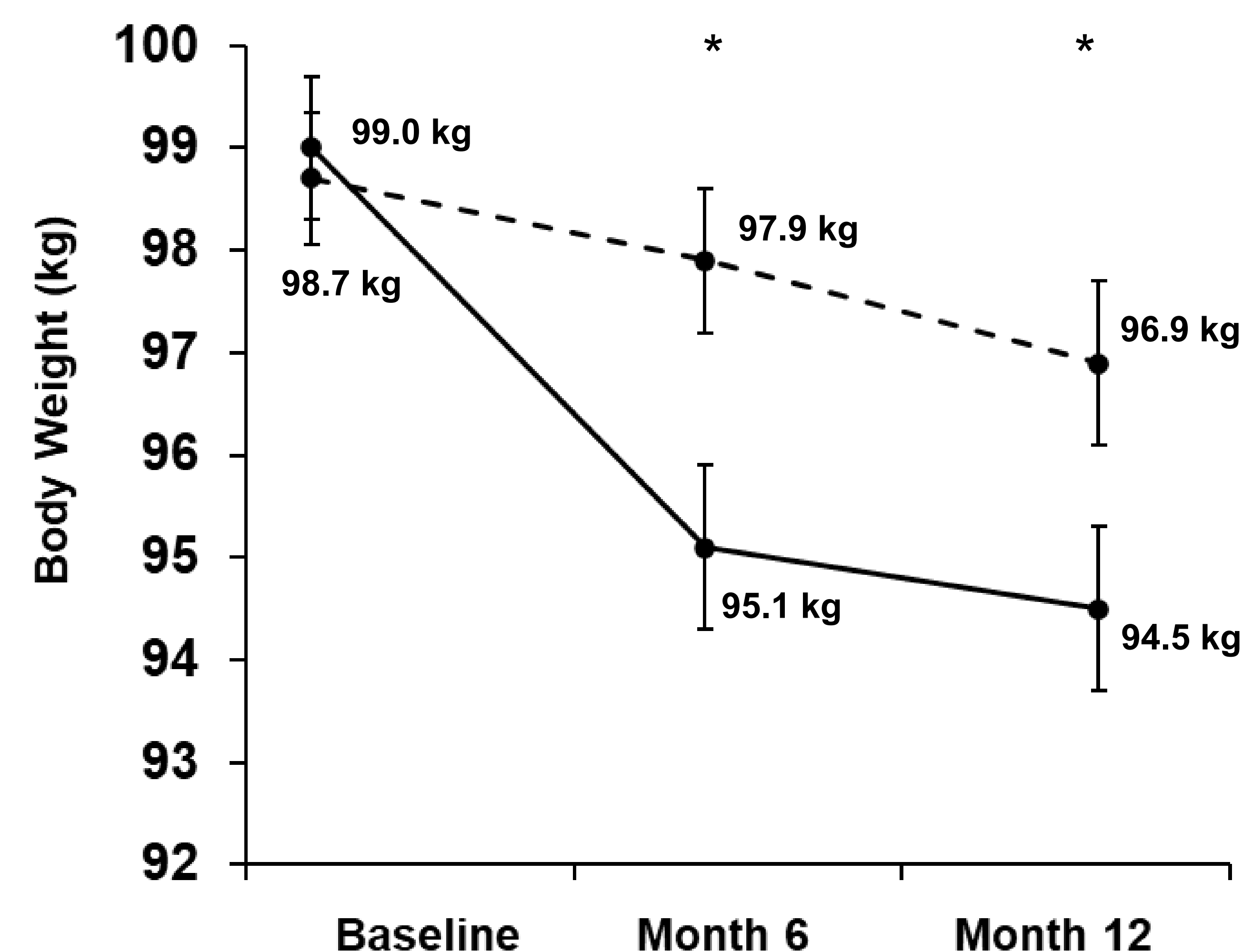


Figure 2. Estimated mean changes in body weight over time by group. Error bars indicate standard errors. Solid lines represent the intervention group and dotted lines represent the usual care group. Statistical models included age, sex, race and education as covariates. *statistically significant difference between groups.

Conclusions

A widely available digital commercial weight management program paired with CGM provided significantly greater improvements in weight loss over 6 and 12 months with significantly greater reduction in HbA1c% at 6 months compared to UC in patients with type 2 diabetes.

References

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