

**Title: Dynamically Tailoring Interventions for Problem-Solving in Diabetes Self-Management Using Self-Monitoring Data - a Randomized Controlled Trial (RCT)**

**NCT04226027**

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All analyses were conducted according to the intent-to-treat (ITT) principal. We used an individual growth model, a special case of linear mixed models, to estimate the primary outcome (HbA1c) scores from baseline to 6 and 12 months. The model included a site -specific random intercept to account for within-site clustering and an individual-specific random intercept to address repeated measures data.

Based on this model, we (1) compared HbA1c scores between the two study arms at different time period, (2) assessed changes in HbA1c from baseline to 6 and 12 months for each study arm, and (3) tested difference in changes of HbA1c from baseline to 6 and 12 months between the two study arms. A similar model was used to examine the secondary outcomes (SCA-I, DSE, PAID).

We also applied an individual growth model with spline regression to characterize HbA1c trajectories in the two study arms. In this analysis, HbA1c measurements were modeled as a function of time, defined as the number of days since enrollment. The spline regression allowed us to compare the trajectories of HbA1c between the two study arms from day 0 through the end of follow-up.