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Impact of Digital Diabetes Solution on Glycemic Control in Adults with Type 2 Diabetes Mellitus in the United States—A Retrospective Cohort Study



New Technology - Glucose Monitoring and Sensing
GPS01 | Saturday General Poster Session

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Background: Dario Diabetes Solution (DDS) is a digital health application (app) that combines a blood glucose (BG) monitoring system with a smartphone app, allowing tracking of BG levels in real time. This study evaluated effectiveness of DDS on HbA1c between DDS users and matched nonusers.

Methods: This retrospective cohort study included adults with type 2 diabetes mellitus (T2DM) with a baseline (BL) HbA1c $\geq 7\%$ who used DDS (users) or received usual care (nonusers) between January 1, 2017, to October 31, 2021. BL period was 1 year before index date (first DDS registration [users] or first claim date in the quarter [nonusers]); follow-up period was 6 months. DDS user and nonuser cohorts were matched 1:3 using exact and propensity score matching. Primary endpoint was change in HbA1c from BL to 6 months, with subgroup analyses of patients (pts) with BL HbA1c $>7.5\%$, $>8\%$, $>9\%$, and $\geq 1\%$ drop from BL. Difference-in-difference results are reported using least squares (LS) means from linear models.

Results: The study included 568 DDS users and 1699 nonusers. For all 2267 pts, mean \pm SD age was 57.5 ± 11.3 years and HbA1c was $9.14 \pm 1.83\%$ at BL. At 6 months, LS mean difference between groups was -0.23% (mean HbA1c change vs BL: users, -1.02% [95% CI, $-1.15, -0.89$]; nonusers, -0.79% [$-0.87, -0.71$]; $P=0.004$). HbA1c drop $\geq 1\%$ from BL to 6 months was achieved by 47% of users vs 37% nonusers (difference: 10%; $P<0.001$). Subgroup analysis at all BL HbA1c showed users achieved more significant HbA1c reductions vs nonusers ($P<0.05$). For pts with BL HbA1c $>9\%$, the healthcare effectiveness data and information set performance measure, mean difference between groups was -0.47% (users, -2.25% [$-2.50, -1.99$]; nonusers, -1.78% [$-1.92, -1.63$]; $P=0.002$).

Conclusions: Adults with uncontrolled T2DM using DDS had better outcomes at 6 months, with more significant HbA1c reductions than matched nonusers across various BL HbA1c levels, showing incremental improvements to usual care.

Disclosure: **N.Thingalaya:** None. **F.Lee:** Employee; ; Sanofi, Stock/Shareholder; ; Sanofi. **D.Kerr:** Consultant; ; Sanofi-Aventis U.S.. **P.Potukuchi:** None. **L.Wilson:** Employee; ; Sanofi. **K.C.Lee:** Employee; ; Sanofi. **E.K.Han-burgess:** Employee; ; Sanofi. **A.Edwards:** Employee; ; Symphony Health, an ICON plc company, Other Relationship; ; Sanofi. **X.Yu:** None. **A.Kennedy:** None.

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