

Digital Health is Changing Diabetes and Weight Management Education

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BACKGROUND

Traditional diabetes and weight management education often relies on retrospective, recall-biased patient reporting, forcing Certified Diabetes Care and Education Specialists (CDCES) into reactive troubleshooting. Digital health tools enable a paradigm shift toward proactive, continuous care by leveraging multi-dimensional tracking across three distinct vectors: energy balance, macronutrient composition (to optimize postprandial excursions and preserve lean mass), and dietary quality via Ultra-Processed Food (UPF) identification. (1,2,3)

SPECIFIC AIMS/PURPOSE

- To evaluate key clinical characteristics and behavioral predictors of success within a cohort of individuals utilizing a digital health application (Welldoc) for weight loss.
- To assess the operational impact of EHR integrated digital health data on the clinical workflow of the registered dietitian nutritionists (RDNs).

IMPLEMENTATION (METHODS)

Patient/Provider Experience:

Enrollment: Patients were invited to use Welldoc by their RDN. Upon agreement, an automated invitation link was generated via the EHR and emailed to the patient. (Figure 1)

Integration: The unique email link established a bidirectional connection, allowing patient-generated Welldoc data to flow directly into the EHR for clinician review.

Intervention: Patients and RDNs utilized the app during monthly, 30-minute virtual appointments. Personalized meal plans were set within the app, allowing patients to track against targets in real time. (Figure 2)

Workflow Optimization: RDNs reviewed synthesized data dashboards directly within the EHR prior to visits, minimizing the need for lengthy manual assessments. Summarized nutrition and health data were efficiently copy-pasted into EHR progress notes to optimize charting time. (Figure 1)

RESULTS

Of the **355 completers** of the **6-month journey**, 83.4% were female; 18- >65 years of age; mean baseline weight was 235.0 pounds (DS: 60.9); mean weight loss was 17.0 pounds (SD: 16.2) and mean weight loss (%) was 7.1% (DS: 6.7%; p, 0.0001).

Over 6 months, the highest-risk group (Class III Severe Obesity, >40 BMI) shrank from 31.3% of the population down to **22.5%**. The “Healthy/Mild Overweight” group (<27 BMI) nearly doubled in size, growing from **7.6% to 14.6%** (Figure 3).

At month 6, the highest risk band (>40 BMI); GLP-1 users achieved 10.4% weight loss

Average daily app engagement in the first 3 month is a predictor of Month 6 weight loss (p, 0.0001; Spearman’s Rank correlation measuring the strength and direction of the relationship between engagement volume and weight loss percentage).

When isolating specific app behaviors and controlling for medication status, logging diet (p = 0.001) is the strongest predictor of success (Ordinary Least Squares Regression used to isolate which specific tracking behaviors actually cause weight loss when controlling for GLP-1 usage).

Figure 1: Screenshots of the Welldoc Digital Health Solution including the Digital App and Clinician Portal

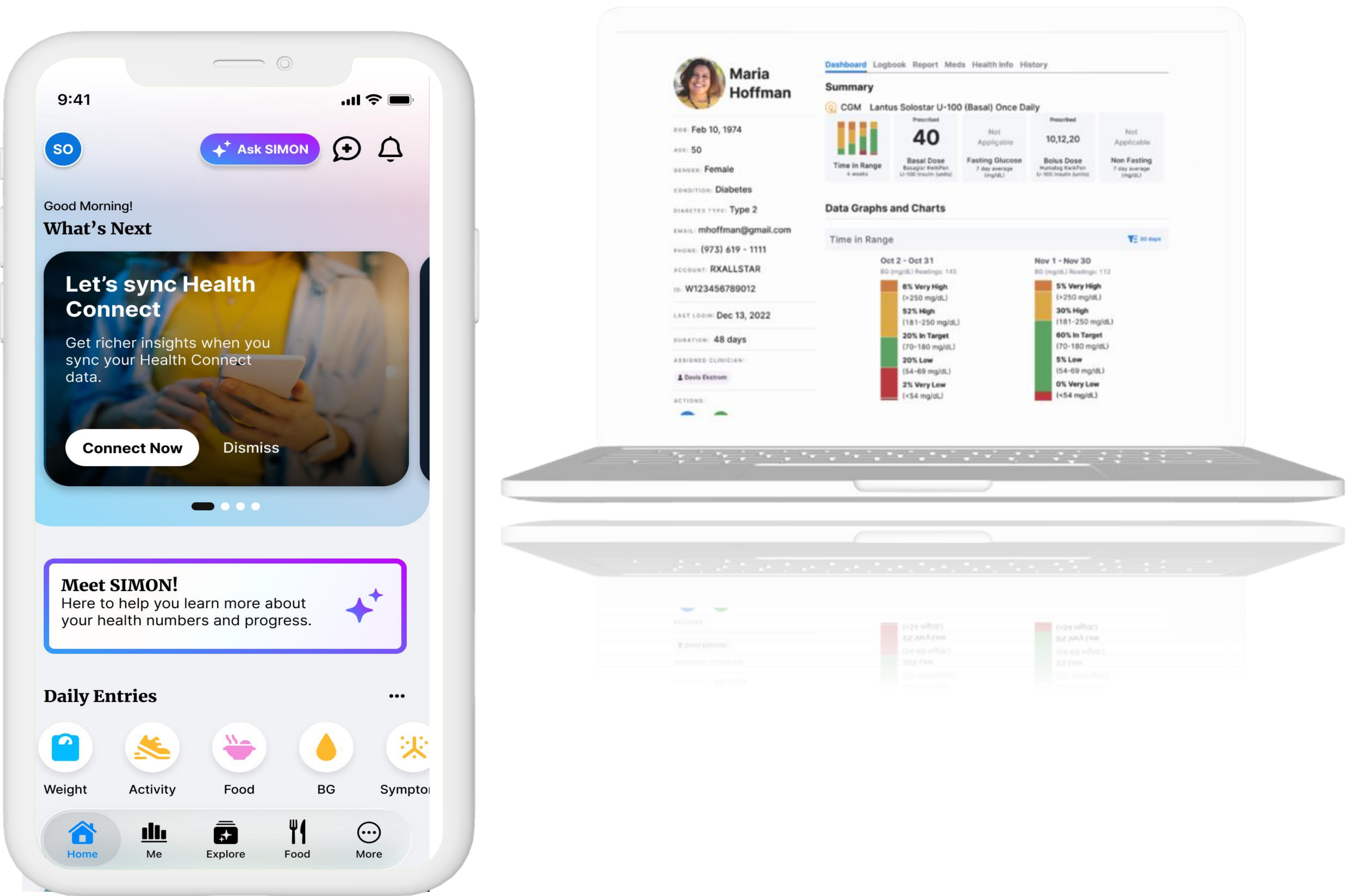


Figure 2: Screenshots of Food Feature in the Welldoc App

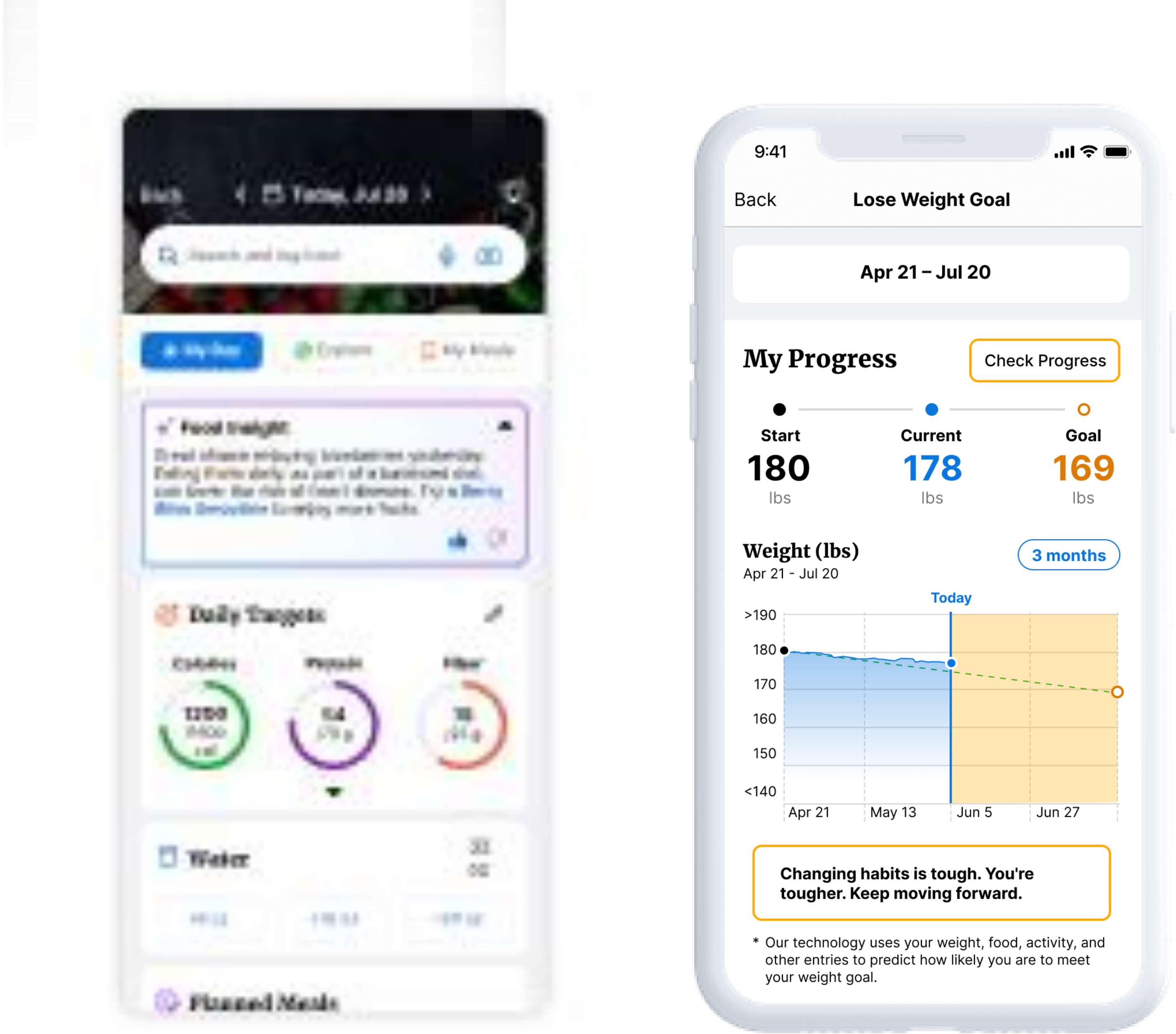
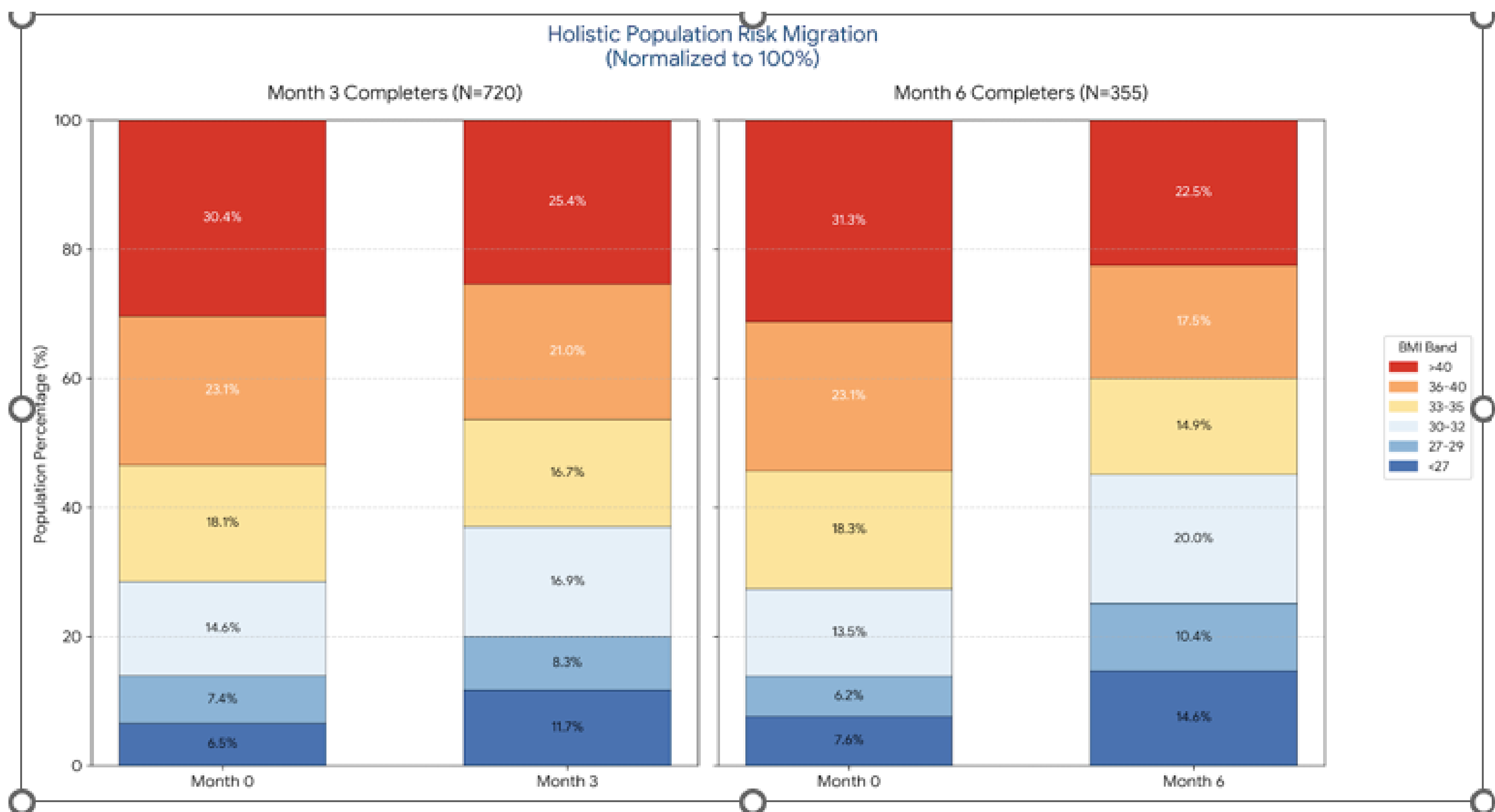


Figure 3: Journey Month 6 – BMI Shift Matrix



DISCUSSION/CONCLUSIONS

Cardiometabolic digital health solutions can be integrated into clinical care to provide a seamless EHR experience including ordering the digital health app and viewing reports. These solutions provide AI-driven self-management support for individuals living with chronic conditions and treatment insights to inform timely therapy optimization for clinicians. The clinical data show a clear correlation between patient app engagement and outcomes. RDs involved in the project shared the time savings benefit of the EHR connection, allowing for adding food logs and macronutrients trends directly into the visit notes.

Clinically Significant Outcomes: The overall population achieved a highly significant average weight loss of 7.1% at Month 6. While GLP-1 users saw accelerated weight loss (especially in the high-acuity >40 BMI band), the digital-only approach independently produced clinically significant results.

The "First 90 Days" Rule: Average daily app engagement in a user's first three months is a highly significant predictor of their Month 6 weight loss. Establishing early habits is the strongest indicator of long-term retention and success.

Nutrition tracking is the Needle-Mover: When running a multivariate regression to control for medication status, logging diet was mathematically isolated as the strongest behavioral predictor of weight loss.

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