

Using Digital Health Technology to Provide Comprehensive Care for Type II Diabetes Mellitus Patients.

Inas Abdelwahed¹, Shrouk Abdellatif², Shahd Amr³, Sahar Amr³, Abdelrahman Tawfik⁴,
Mona Abdelmotaleb⁵

1 Digital health specialist

2 Nutritionists Team Lead

3 Nutritionist

*4 Department of Pharmacotherapy Outcomes, College of Pharmacy, the University of Utah,
Salt Lake City, UT, United States*

5 National Institute of Diabetes and Endocrinology

Introduction:

Diabetes mellitus (DM) is one of the fastest-growing diseases in Egypt.

Studies showed that DM is better controlled when patients actively participate in managing the disease. Providing health education and using a comprehensive approach by using proper medications, lifestyle modification, counseling patients on self-management, and integrating innovative tech solutions play a crucial role in optimizing resources to adopt a healthy lifestyle by controlling the risk factors.

Methodology:

A pilot pre-post-study of a comprehensive care program using Otida mobile application. The program consists of medication regimen, nutrition intervention, lifestyle modification and patient companionship. Patients' demographics and clinical data were collected. HbA1c and weight for each patient were collected over three months. The numeric data is presented by mean, while percentages will show the categorical ones. Paired t-test was used to compare the effect before and after our comprehensive care intervention.

Results:

35 diabetic patients were enrolled. The Mean age was 52.4 years old. The Mean \pm SD for HbA1c before the intervention was 7.59 ± 1.42 and after the intervention was 6.89 ± 1.19 . The BMI before the program was 32.32 ± 7.42 and after the program it became 30.87 ± 7.07 . The reduction for both indicators were significantly associated with the program (p -value < 0.05).

Conclusion:

Integrating innovative digital health solutions such as mobile applications with patient-centric comprehensive care model have a remarkable role in managing DM.

The program used digital health in data analysis, sending reminders, continuous blood glucose monitoring, health diaries and other patient-engaging features. Using both digital health and comprehensive care approaches ensure better clinical outcomes.

Keywords:

Digital Health, Diabetes Mellitus, life-style modification, comprehensive care, Innovation.