

## Role of digital therapeutic in increasing the addressable market for insurance without underwriting higher risk

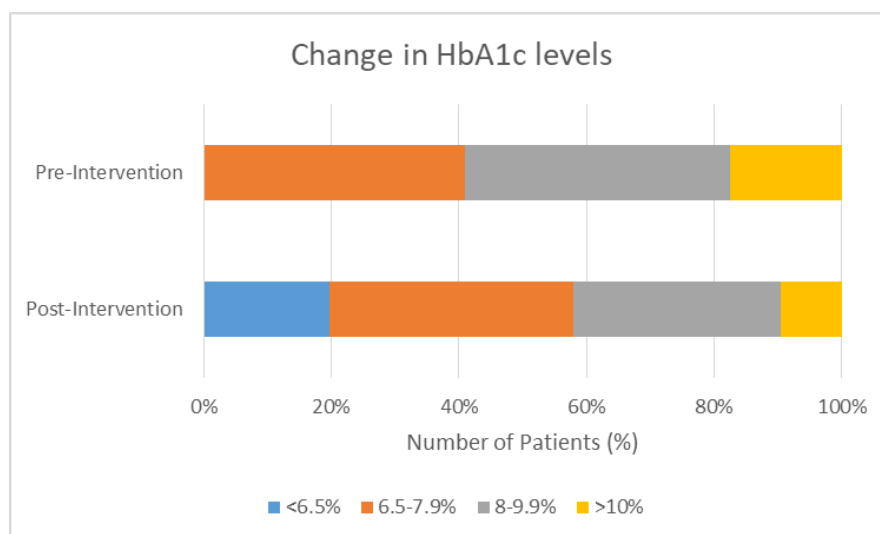
*Arjun Krishnakumar, Sid Kolwankar, Prayat Shah, Vinod Mattoo.*

Wellthy Therapeutics Pvt. Ltd., Mumbai.

**Introduction:** The burden of chronic diseases like Type 2 Diabetes (T2D) and the associated complications is on the rise in India. Furthermore, the health protection gap in India is estimated to be \$369 bn, and 37% of which arises from chronic diseases of diabetes, hypertension, and high cholesterol (1). Patients with T2D have to pay high premiums and insurers have to underwrite patients at a much higher risk. Digital therapeutics present an opportunity to provide personalised interventions by changing behaviour to improve outcomes and thereby reduce the risk of complications and subsequent need for hospitalizations (2). We evaluate the effectiveness of the Wellthy Care™ digital therapeutic in changing behaviour to improve glycaemic control in patients with T2D in India.

**Methods:** Patients from India were enrolled on a 16 week self-management program, based on AADE7™ self-care behaviours, delivered via the Wellthy Care™ (WC) app. This program provides real-time feedback via an AI-powered chatbot and periodic, planned health coaching through certified diabetes educators via voice calls and chats. At the end of the program the first reported HbA1c was compared to the last reported HbA1c and the change in HbA1c, was correlated to the interactions with the WC app.

**Results:** 149 patients completed the program and reported 2 HbA1c readings. The average age of the participants was 50.48 years (95% CI: 51.95 to 49.02 years) of whom 66% were males (98/149). The mean pre- and post-intervention HbA1c levels were 8.59% (95% CI: 8.83 to 8.35%) and 7.88% (95% CI: 8.12 to 7.64%) with a significant mean reduction of -0.72% (95% CI: -0.51 to -0.92%,  $p < 0.0001$ ). Out of all the patients, 16% of the patients (24/149) achieved an HbA1c of  $< 6.5\%$  (Figure 1). Sixty-six percent of the participants (99/149) reduced HbA1c by the end of the program with a significant mean reduction of -1.32% (95% CI: -1.12 to -1.52%,  $p < 0.001$ ); 60% of the patients (90/149) reduced their HbA1c more than -0.3%.



**Figure 1:** Change in the proportion of population at different HbA1c levels.

**Conclusion:** The WC dtx improved HbA1c levels significantly. A Dtx like WC can be an effective tool for improving glycaemic control in a resource constrained country like India thereby creating a potential to close the health protection gap. Digital therapeutics present an additional opportunity for insurers to increase their insurable population without underwriting higher risk.

## **References**

1. Sharan R, Wong C. The health protection gap in Asia: a modelled exposure of USD 1.8 trillion. Zurich: Swiss Re management Ltd; 2018. 1507520\_18\_EN.
2. Kvedar JC, Fogel AL, Elenko E, Zohar D. Digital medicine's march on chronic disease. Nat. Biotechnol. 2006; 34(3):239-46