

# Real World Data Analysis shows a significant improvement on Glycemic Management when using a Blood Glucose Meter connected with a Mobile Health Application in people with diabetes



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## Background and Aims:

The use and recommendation of mobile health (mHealth) applications in diabetes management has increased over the last decade. Previous real world data (RWD) studies have shown an improvement of blood glucose (BG) with the use of these tools, but mainly in people with type 1 diabetes (T1D)<sup>1</sup>. Our aim was to investigate the impact of using BG monitoring connected to the mySugr<sup>®</sup> mHealth app on the diabetes management of type 2 diabetes (T2D) users, since this population tends to show poorer glycemic outcomes and more diabetes-related complications.

## Materials and Methods:

We performed a retrospective analysis of 3274 users of Accu-Chek meters connected to mySugr<sup>®</sup> app with T1D & T2D users from 9 countries in North Western Europe & Canada, who enrolled between March 2013 and May 2022, and were highly engaged, defined as  $\geq 2$  logs on at least 14 out of 30 days. Impact on estimated HbA1c<sup>2</sup> (eHbA1c) and percentage of Tests in Range (TiR) were calculated after 4 months of connecting the BG meters to the mobile app.

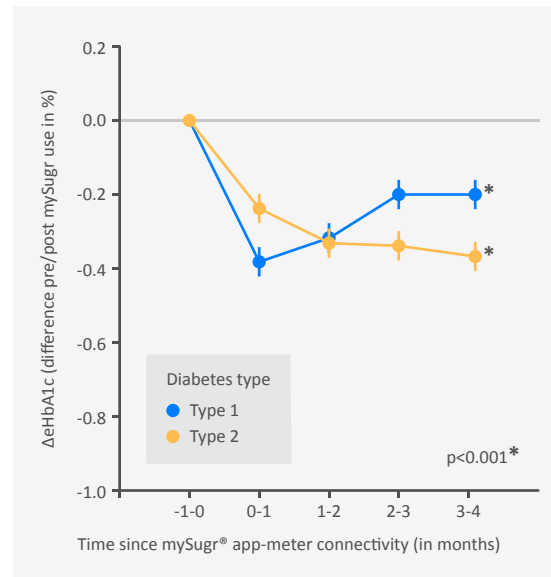
## Results:

After **4 months of use of mySugr<sup>®</sup> app connected to the BG meters**, a statistically significant reduction of **0.35% of eHbA1c** is observed in **T2D users**.

Interestingly, the eHbA1c reduction was already observed after 1 month of mySugr<sup>®</sup> app connectivity (see figure 1).

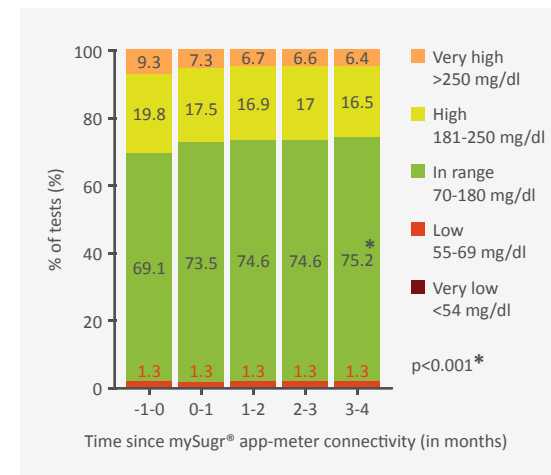
From the 3274 total users, 43.04% presented T1D and 56.96% T2D.

**Figure 1. Reduction of estimated HbA1c**



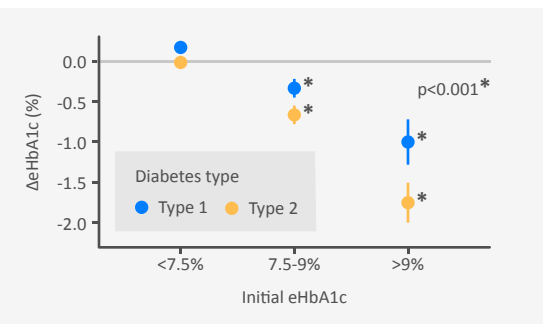
The percentage of blood glucose tests performed in range by T2D users significantly increased (6.13% points; p<0.001) with mySugr<sup>®</sup> app connectivity, and same as for glucose control, it was already observed after 1 month of the app use (see figure 2).

**Figure 2. Blood Glucose Tests in T2D users**



Even though the **greatest improvement in eHbA1c** was seen in people with **T2D starting with eHbA1c>9%** (-1.76%; p<0.001), we **also observed a significant improvement** in those with an **initial eHbA1c>7.5%** (-0.58%;p<0.001) (see figure 3).

**Figure 3. Estimated HbA1c reduction in subgroups of T1D & T2D users**



## Relevant information:

- Time point “-1-0” refers to historic data imported from BG meters
- eHbA1c & Test ranges: have been calculated for each patient and then aggregated

## Conclusions:

Among a population with T2D across Europe and Canada, use of a BG meter connected with mySugr<sup>®</sup> app was shown to significantly improve diabetes management over a 120-day period.