467-P

Immediate And Sustained Trends In Glycemic Control During Remote Patient Monitoring In People With Type 2 Diabetes

Tong Sheng, **Sarine Babikian**, Vikram Singh, Mark A Clements

Glooko, Inc., Palo Alto, CA

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DISCLOSURES

M. Clements is an employee of Glooko, and has received consulting fees from Eli Lilly and Medtronic, and other fees from Intrexon and Provention. He has received research support from Dexcom and Abbott Diabetes Care.

S. Babikian, V. Singh and T. Sheng are current or former employees of Glooko.

INTRODUCTION

- Digital health tools such as connected devices and self-management mobile apps have emerged to support the monitoring and management of chronic conditions such as type 2 diabetes.

- These technologies can also enable and facilitate the sharing of diabetes data from patients to their care teams.

- With remote access to patient data, care teams can identify patients with deteriorating glycemic control and deliver timely and remote-based interventions (e.g., coaching) outside of routine clinic visits.

METHODS

- We investigated whether people with type 2 diabetes (PWT2D) demonstrated improved glycemia after participating in remote patient monitoring (RPM) programs.
- All participants synced their blood glucose meters regularly during the program. Synced glucose data were available to the RPM care teams via a web platform.
- Remote coaching was administered regularly and/or as needed.
- We analyzed glycemic outcomes from SMBG data from the RPM program participants at various time points of the program, up to 12 months.

DEMOGRAPHICS

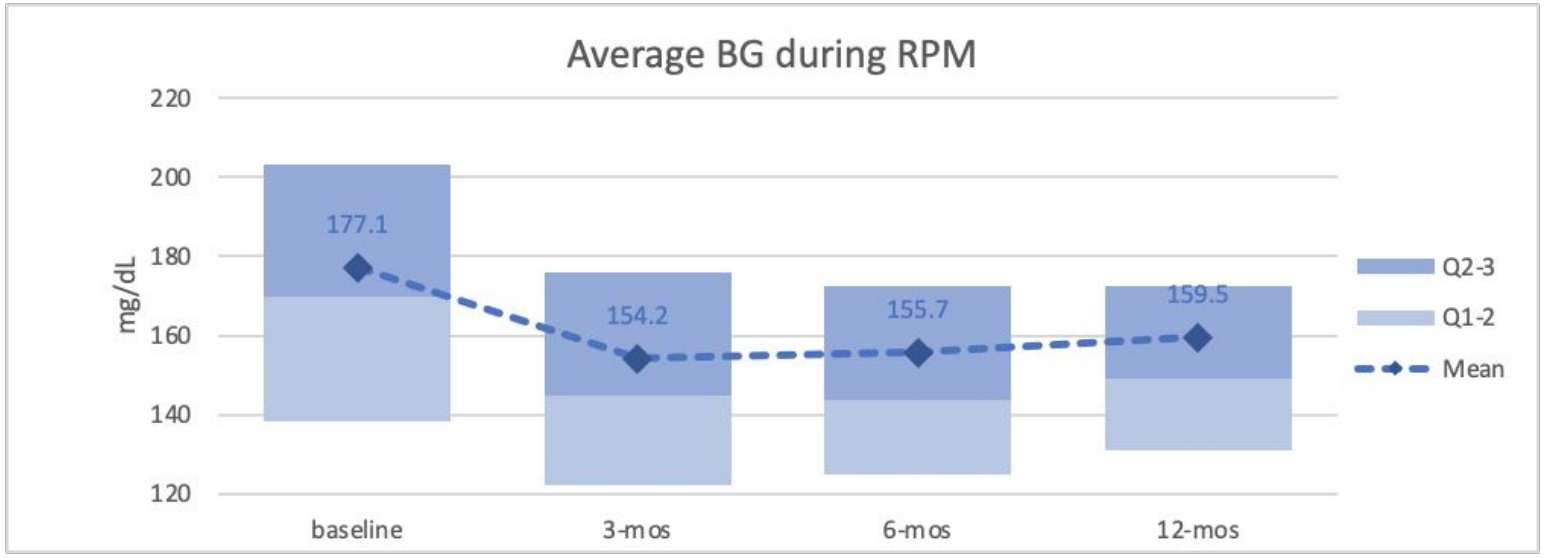
N (baseline)	Diabetes Type	Gender (If Specified)	Age Median (IQR)
424	100% Type 2	46% Female	50 (42-59)

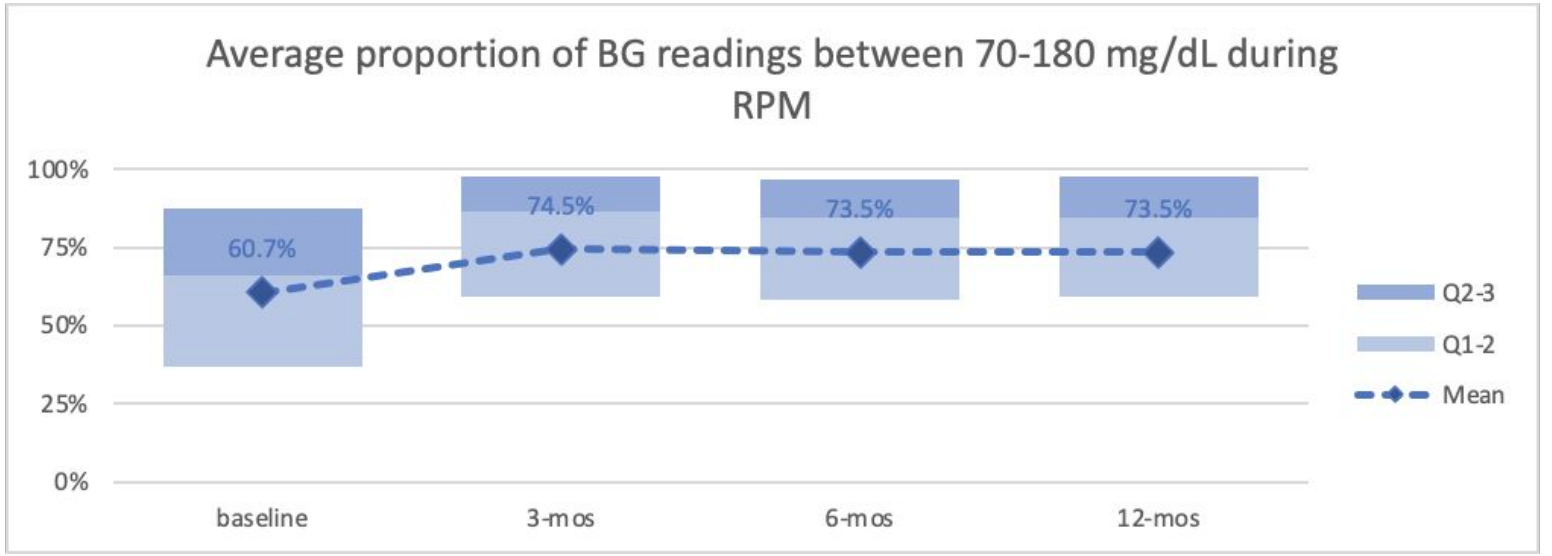
Cross-sectional comparisons at baseline, 3- (N_3 = 331), 6- (N_6 = 228), and 12-months (N_{12} = 129) of RPM program participation

RESULTS

IMMEDIATE (3 mos) AND SUSTAINED (6, 12 mos) IMPROVEMENT COMPARED TO BASELINE (ALL Ps < .05):

- Average glucose decreased by **~12% (20 mg/dL)**
- Average proportion of SMBG readings between 70-180 mg/dL increased by **~22% (13 percentage points)**

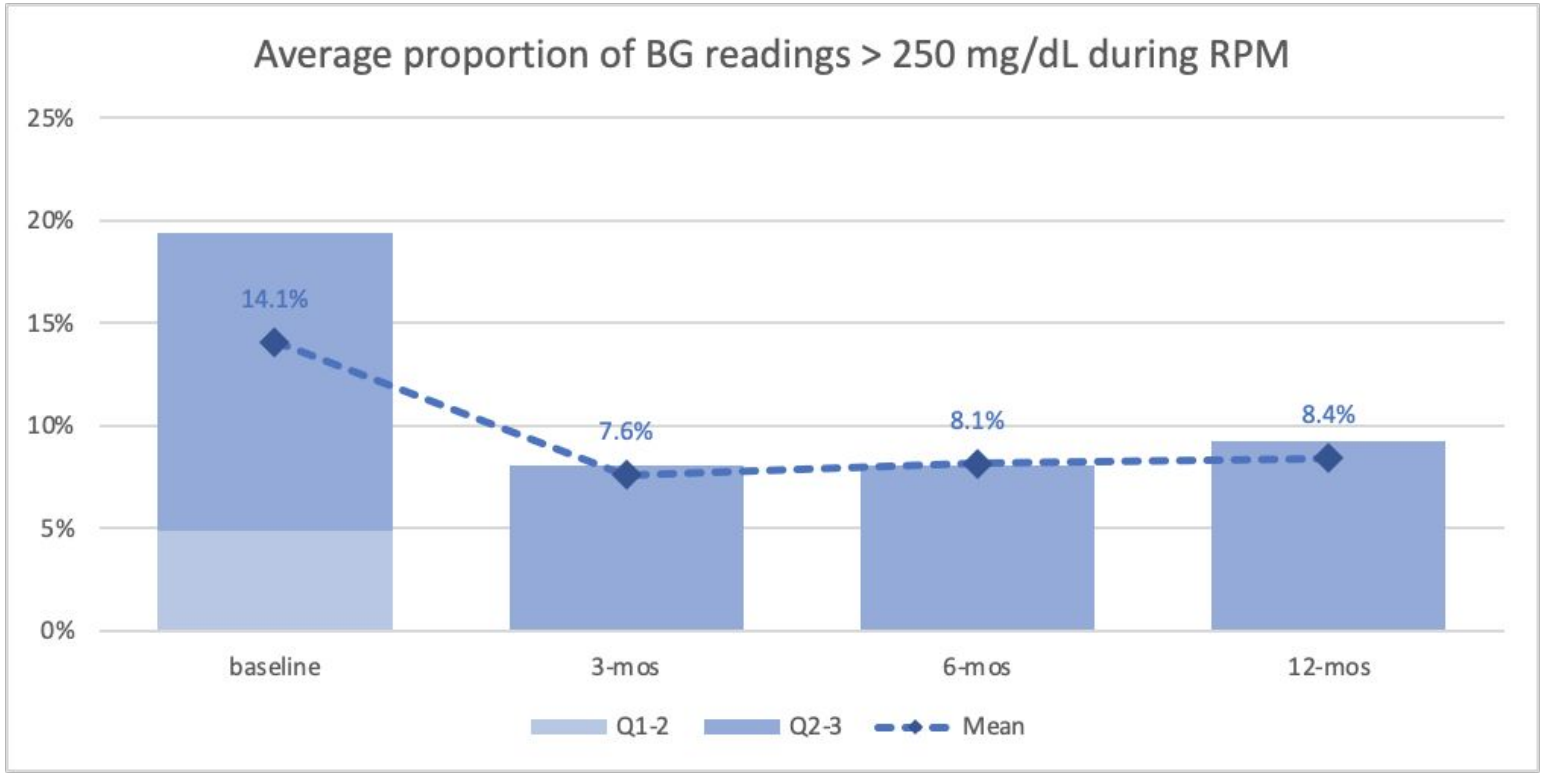




RESULTS

IMMEDIATE (3 mos) AND SUSTAINED (6, 12 mos) IMPROVEMENT COMPARED TO BASELINE (ALL Ps < .05):

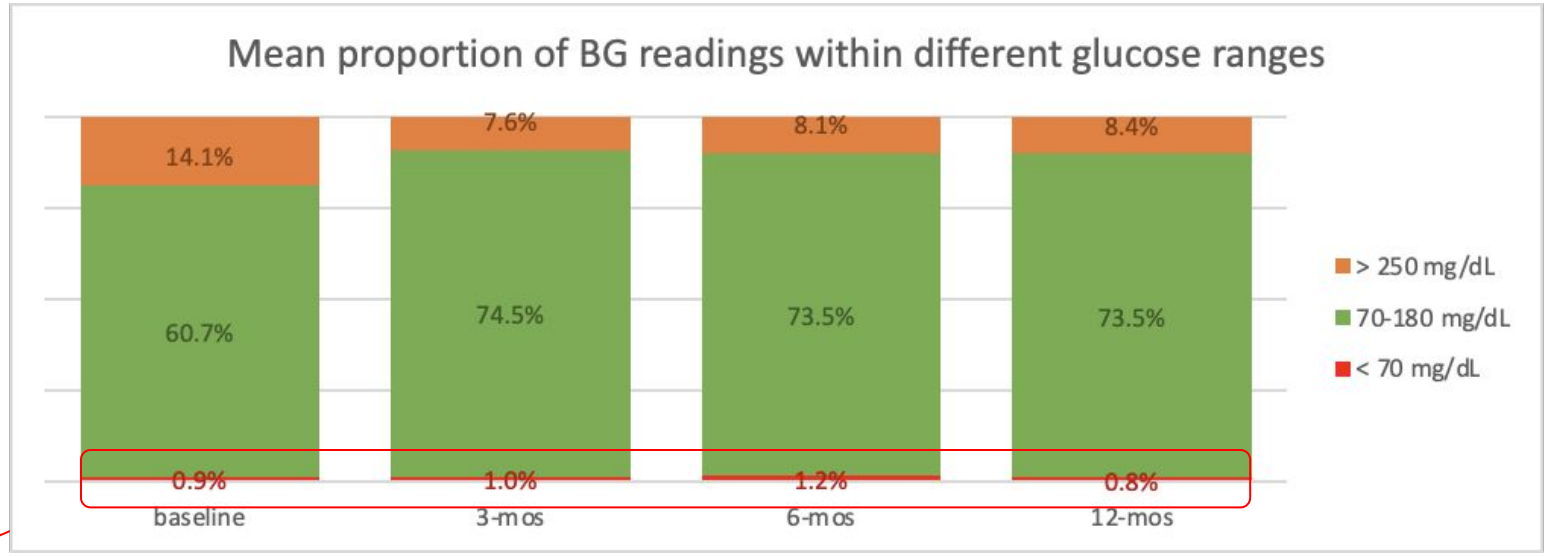
- Average proportion of readings > 250 mg/dL decreased by **~42% (6 percentage points)**

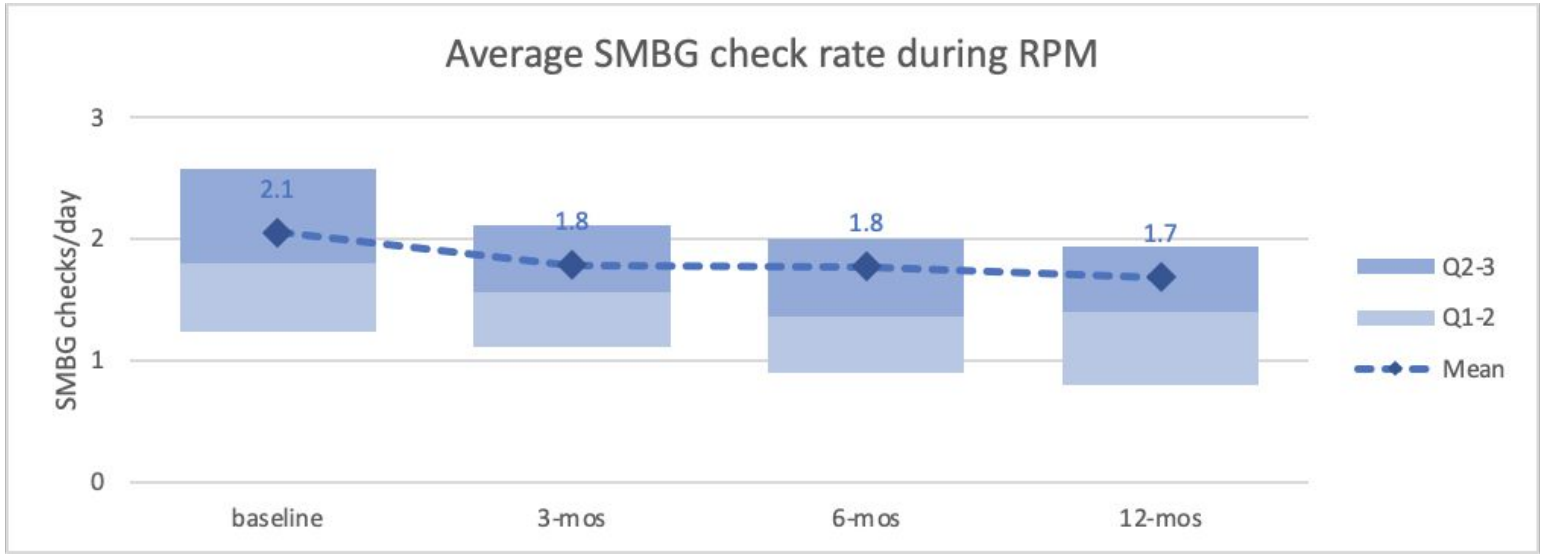


RESULTS

GLYCEMIC IMPROVEMENTS COMPARED TO BASELINE WERE ACCOMPANIED BY:

- No differences in frequency of hypoglycemic readings
- Lower frequency of SMBG checks ($P < .05$)





RESULTS SUMMARY

IMPROVED GLYCEMIC OUTCOMES WERE OBSERVED IMMEDIATELY AND MAINTAINED LONG TERM

Average glucose levels decreased by **~12% (~20 mg/dL)**

Average proportion of SMBG readings between 70-180 mg/dL increased by **~22% (~13 percentage points)**

Average proportion of readings > 250 mg/dL decreased by **~42% (~6 percentage points)**

- Average proportion of readings < 70 mg/dL did not change during RPM
- Average frequency of SMBG checks decreased during RPM

CONCLUSION

- Glycemic improvements are observed within 3 months of RPM program enrollment and are sustained with continued participation.
- Programs that incorporate remote data sharing and coaching can support and maintain positive glycemic control for people living with type 2 diabetes.