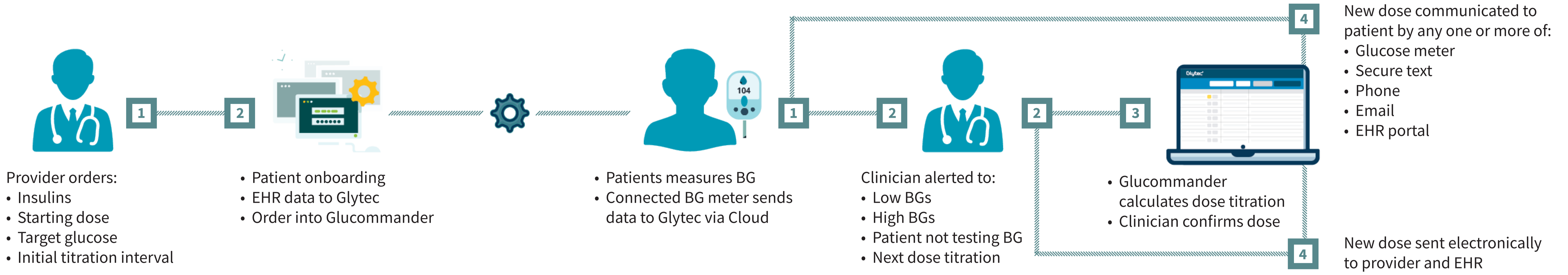


BLOOD GLUCOSE TESTING FREQUENCY CORRELATES TO A1C REDUCTION AFTER 3 MONTHS OF INSULIN TITRATION UTILIZING GLUCOMMANDER™

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BACKGROUND

Effective basal bolus insulin therapy requires dose titration to identify the right doses for each individual patient. Self-monitoring of blood glucose (SMBG) provides the requisite data to make dose titration successful. The intention of our study was to compare A1C improvement in two groups: a group that SMBG less than half of the prescribed 4 times/day vs. a group that SMBG more than half of the prescribed 4 times/day.

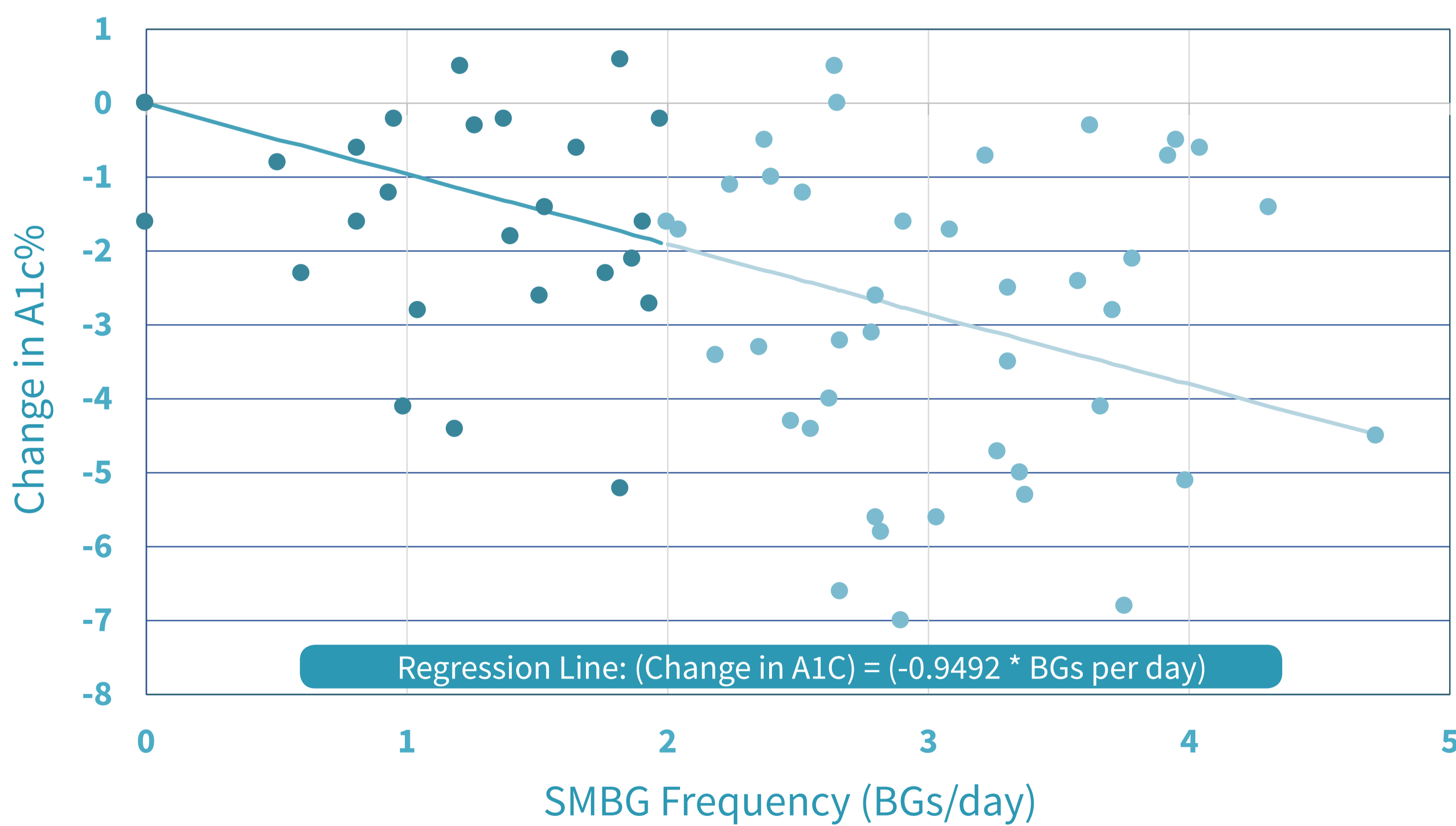
METHODS

This retrospective study evaluated 68 patients with type 1 and type 2 diabetes mellitus who had their basal and bolus insulin doses adjusted by a healthcare professional that utilized Glucommander diabetes therapy management software (DTMS) to analyze blood glucose data and calculate each dose titration of their basal and nutritional insulin. We compared the A1C reduction at three months of patients that SMBG < 2 times/day to those that SMBG ≥ 2 times/day.

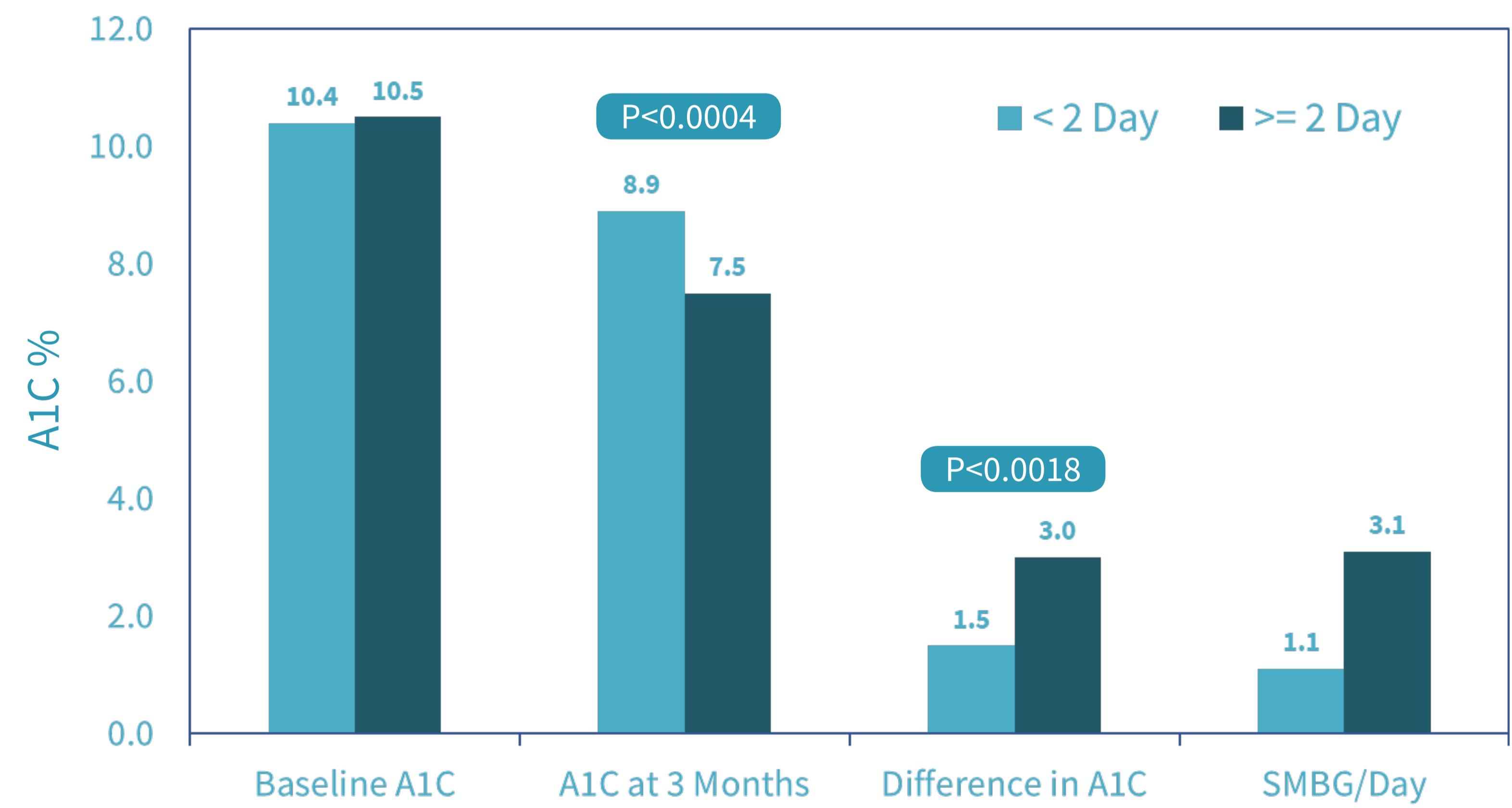
Patient Demographics

	SMBG < 2/day	SMBG ≥ 2/day
Average Age	55	58
Male (%)	56%	63%
Average Initial BMI	31.7	31.7
Average Initial Weight (kg)	92.4	96.5
Average Weight at 3 months (kg)	93.5	99.6
Weight Change (kg)	1.1	3.1
Average Final Weight (kg)	96.0	25.0
Type 2 DM	78%	78%
Type 1 DM	22%	22%
Average Years with DM	18.2	13.0

SMBG FREQUENCY VS. CHANGE IN A1C% AFTER 3 MONTHS OF TREATMENT



More Frequent SMBG Results in Better Control



RESULTS

The 27 patients that tested < 2 times/day had a starting A1C of 10.4%, tested 1.1 times/day and had a 1.5% A1C reduction. The 41 patients that tested ≥ 2 times/day had a starting A1C of 10.5%, tested 3.1 times/day and had a 3.0% A1C reduction.

A1c at Baseline vs. 3 Months

	SMBG < 2/day	P-value	SMBG ≥ 2/day
A1c at Baseline	10.4%		10.5%
A1c at 3 Months	8.9%	<0.00004	7.5%
A1c Difference	1.5%	<0.0018	3.0%

Conclusions

The use of diabetes therapy management software (DTMS) for the titration of basal bolus insulin therapy has been shown to be effective; however, more frequent SMBG renders the DTMS even more effective.

For patients reluctant to SMBG two or more times daily, the use of continuous glucose monitoring during the time of titration may be an effective alternative to fingerstick SMBG in order to better inform a DTMS decision support tool.

