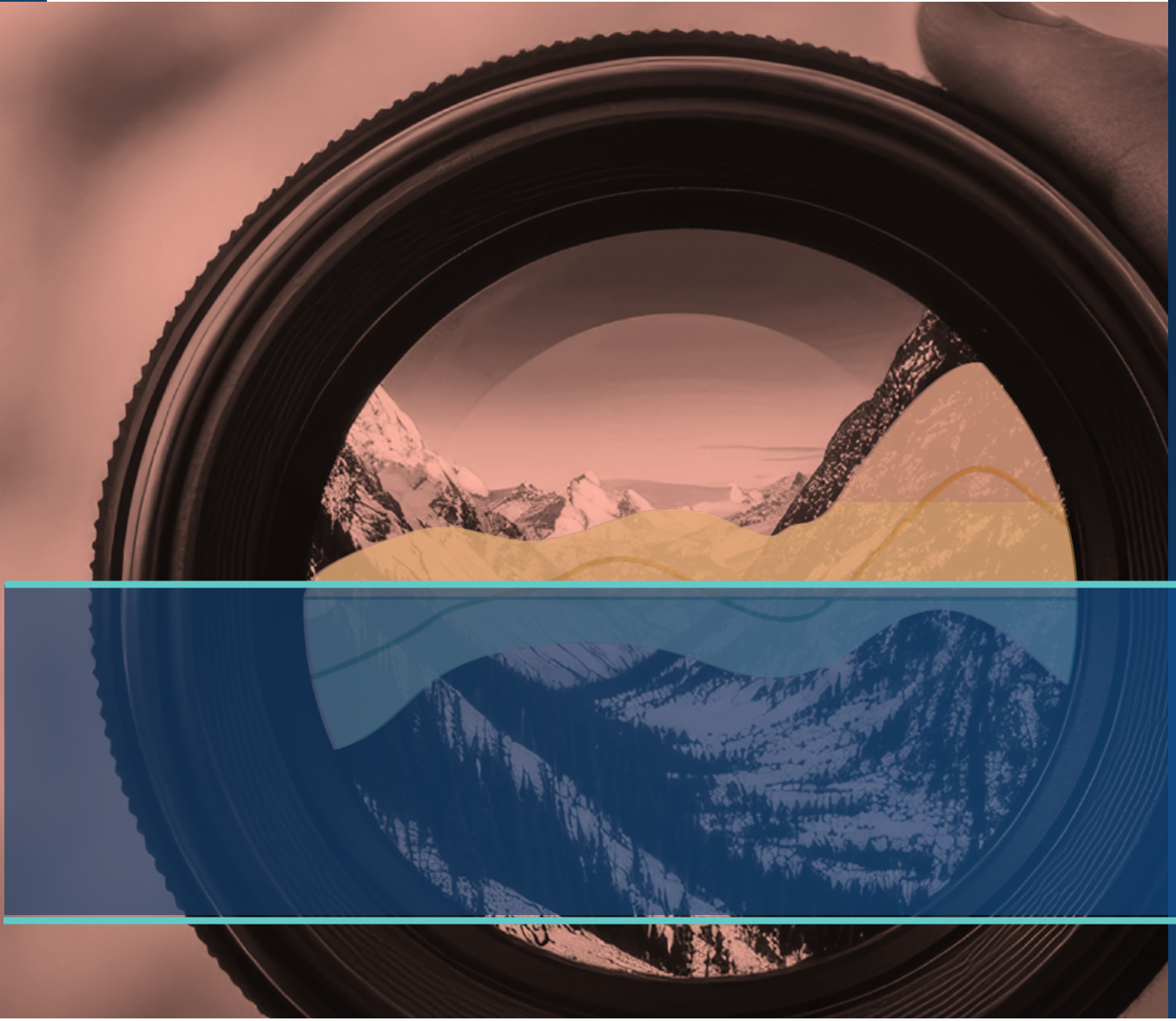


In the Range: Real Talk on Diabetes Monitoring Best Practices

Episode 4: CGM in the Real T2D World

Cornerstone Medical Education

AACME® AMERICAN ACADEMY OF CME, INC.

Presented by Cornerstone Medical Education and American Academy of CME.

Supported by an educational grant from Abbott Diabetes Care.

CGM in T2D: Where Are the Gaps?

Access and Coverage

- Underutilized in real world practice, especially outside endocrinology[1,2]
- Cost and insurance barriers persist[3]
- Coverage does not fully align with evidence in non-insulin treated T2D[2,3]

Equity

- Lower use in Black, Hispanic, uninsured, and non-English preference populations[1,4]

Implementation

- Primary care barriers, time, workflow, training, infrastructure[3]
- Prescription does not equal successful use[4]

Education and Interpretation

- Difficulty translating CGM data into action for both patients and clinicians[2,3]

Persistence and Experience

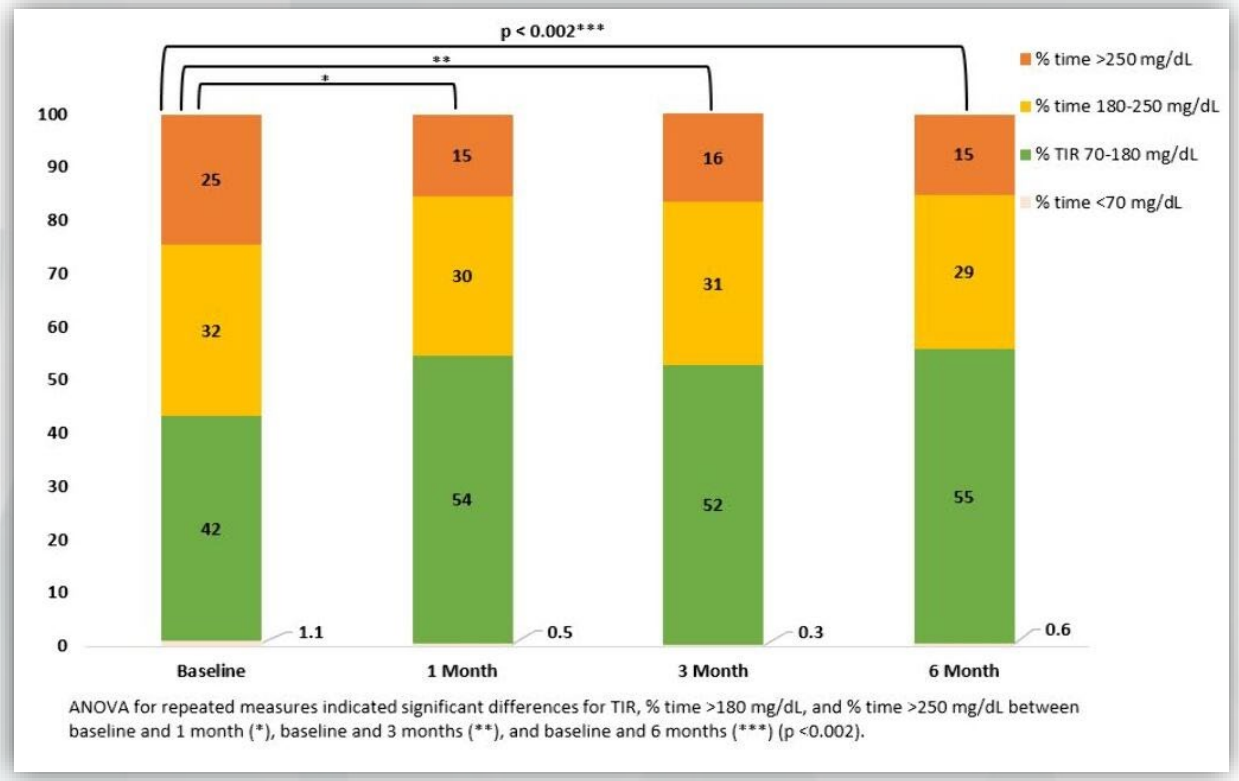
- Outcomes depend on sustained wear, often inconsistent[2]
- Device burden, skin issues, and usability challenges limit continuation[2,3]

Wallia A, et al. *JAMA Netw Open*. 2024; Barchiesi MA, et al. *Int J Qual Health Care*. 2025; Hall T, et al. *J Am Board Fam Med*. 2024; Rodriguez JA, et al. *JAMA Netw Open*. 2025.

CGM in Older Adults- Benefits Seen in First Month

Older adults with insulin-treated diabetes and CGM naïve (N=59, mean age 71+/-5 years, mean duration 24+/-12 years, 24% with T1D)

Intervention included remote education pertaining to CGM use, tailored to address age-specific barriers encountered by older adults.



ANOVA for repeated measures indicated significant differences for TIR, % time >180 mg/dL, and % time >250 mg/dL between baseline and 1 month (*), baseline and 3 months (**), and baseline and 6 months (***) (p <0.002).

Cornerstone Medical Education

AACME® AMERICAN ACADEMY OF CME, INC.

Toschi E, et al. *Diabetes Techno Ther*. 2026.

CGM Improved Glycemic Control without Any Significant Change to TBR

- Multicenter, parallel design, two-phase (32 weeks in total), RCT conducted in 24 UK sites (FREEDM2)
- Sensor-based outcomes assessed at baseline, 16 weeks and 32 weeks.
- At 16 weeks, significant improvements in mean glucose (adjusted difference -1.1mmol/L, p<0.0001), time in range (TIR) 3.9-10.0mmol/L (10.0%, p=0.0001), time above range (TAR) >10.0mmol/L (-9.8%, p=0.0002) and >13.9mmol/L (-9.5%, p<0.0001) and standard deviation (SD) of glucose (-0.4mmol/L, p<0.0001) were observed in the FSL3 group, compared with the SMBG group.
- Time below range (TBR) was low and comparable between groups. (No severe hypoglycemia)

Parameter	Baseline mean ± SD		16 weeks mean ± SD		Difference in adjusted means (vs control) mean ± SE	P value (vs control)
	FSL3 (N=198)	SMBG Control (N=105)	FSL3 (N=198)	SMBG Control (N=105)		
n, non-missing	189	87	189	87		
Mean glucose, mmol/L	11.6±2.3	11.4±2.4	10.2±2.0	11.2±2.8	-1.1±0.26	**<0.0001***
TIR (3.9–10.0mmol/L), %	39.5±22.0	42.5±22.9	53.9±21.9	45.2±24.6	10.0±2.55	**0.0001***
TAR (>10.0mmol/L), %	60.0±22.5	57.0±23.3	45.7±22.1	54.2±25.1	-9.8±2.59	**0.0002***
TAR (>13.9mmol/L), %	25.6±19.7	24.1±19.7	14.9±15.6	23.8±22.0	-9.5±2.03	**<0.0001***
TBR (<3.9mmol/L), %	0.5±1.2	0.5±1.2	0.4±1.2	0.6±1.4	-0.2±0.16	0.2657
Episodes <3.9mmol/L, number per day^	0.1±0.2	0.1±0.2	0.1±0.2	0.1±0.2	0.0±0.03	0.2352
TBR (<3.0mmol/L), %	0.1±0.3	0.0±0.1	0.0±0.2	0.1±0.2	0.0±0.03	0.5803
SD glucose, mmol/L	3.3±0.9	3.3±0.9	2.9±0.8	3.3±1.0	-0.4±0.09	**<0.0001***
CV glucose, %	29.0±6.4	29.4±5.9	28.6±5.7	29.8±6.1	-0.9±0.54	0.0907

Table: Change in CGM-based metrics from baseline to 16-weeks. *: p<0.05, ^: Events ≥15 minutes duration, TIR: time in range, TAR: time above range, TBR: time below range, SD: standard deviation, CV: coefficient of variation.

Cornerstone Medical Education

AACME® AMERICAN ACADEMY OF CME, INC.

Leelarathna L, et al. *(#262) Diabetes Techno Ther*. 2026.

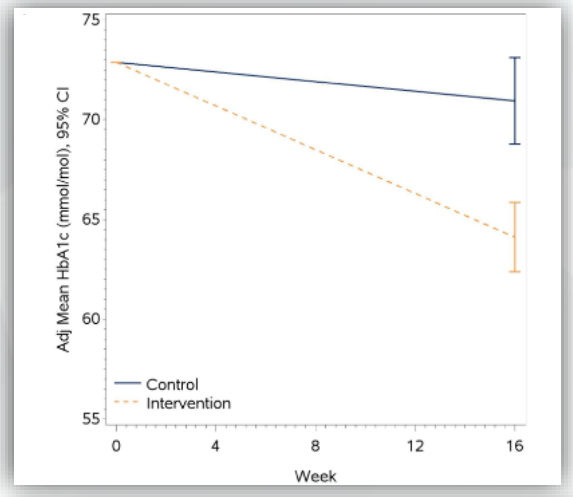
CGM Use in People with T2D on Basal Insulin + SGLT2 Inhibitor/GLP-1 Agonist

Multicentre, parallel design, two-phase (32 weeks total), RCT conducted in 24 UK sites (FREEDM2)

- Phase 1 focused on self-management, including basal insulin self-titration

Results:

- Mean HbA1c changed from 73mmol/mol at baseline to 64mmol/mol at 16 weeks in the FSL3 group and from 73mmol/mol to 71mmol/mol in the SMBG group (adjusted difference, -7mmol/mol (-0.6%) [95% CI, -9mmol/mol to -4mmol/mol]; p<0.0001).
- There was a greater proportion of participants in the FSL3 group achieving HbA1c targets of 53, 59, and 64mmol/mol as well as achieving HbA1c reductions of ≥5.5mmol/mol, ≥11mmol/mol and ≥10% from baseline.



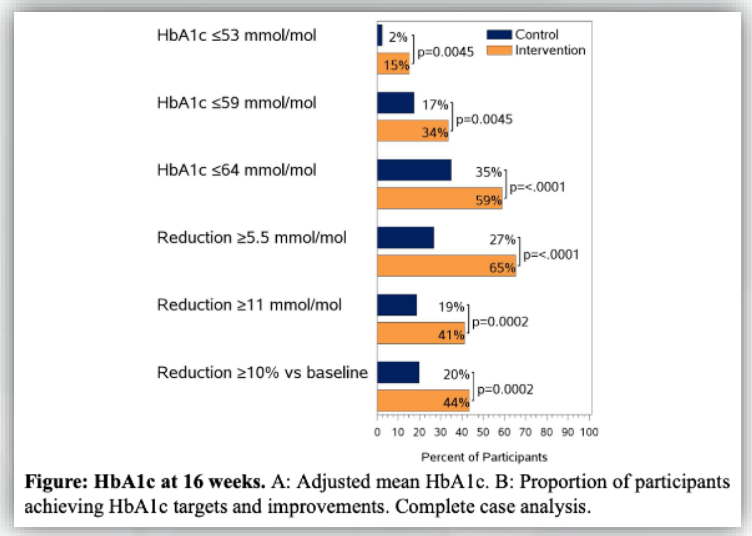


Figure: HbA1c at 16 weeks. A: Adjusted mean HbA1c. B: Proportion of participants achieving HbA1c targets and improvements. Complete case analysis.

Cornerstone Medical Education

AACME® AMERICAN ACADEMY OF CME, INC.

Wilmot E, et al. *Diabetes Techno Ther*. 2026.

CGM Use in People with T2D on Basal Insulin

Adults aged 18-75 years from
8 Italian centers (N=88)

Parameter	Baseline	3 months	Change from Baseline	P value
Average glucose, mmol/L	9.4 ± 2.1	8.7 ± 1.6	-0.7 ± 2.0	**0.0031***
TIR (3.9–10.0mmol/L), %	62.1 ± 22.8	72.6 ± 20.5	10.5 ± 20.5	**<0.0001***
TAR (>10.0mmol/L), %	36.6 ± 23.8	27.0 ± 20.5	-9.7 ± 22.1	**0.0004***
TAR (>13.9mmol/L), %	9.9 ± 14.8	5.0 ± 9.8	-4.8 ± 13.9	**0.0040***
TBR (<3.9mmol/L), %	1.3 ± 4.1	0.4 ± 1.0	-0.9 ± 4.2	0.3604
TBR (<3.0mmol/L), %	0.04 ± 0.14	0.03 ± 0.13	-0.00 ± 0.2	0.4240
SD glucose, mmol/L	2.5 ± 0.8	2.2 ± 0.7	-0.3 ± 0.8	**0.0008***
CV glucose, %	27.1 ± 6.2	25.3 ± 5.8	-1.8 ± 5.7	**0.0078***
IGMSS, mean score	3.5 ± 1.0	4.6 ± 0.5	1.1 ± 1.1	**<0.0001***
Total daily insulin dose, units				
All participants	22.8 ± 13.1	23.8 ± 13.3	1.0 ± 7.5	0.2504
Excluding 8 participants who started bolus insulin	22.9 ± 13.6	22.6 ± 13.1	-0.4 ± 5.9	0.6003

Table: Changes to CGM-based metrics, IGMSS and insulin dose. Data expressed as mean ± SD. *:p<0.05, TIR: time in range, TAR: time above range, TBR, time below range, SD standard deviation, CV: coefficient of variation.

Cornerstone Medical Education

AACME® AMERICAN ACADEMY OF CME, INC.

Giorgino F, et al. *Diabetes Techno Ther*. 2026.

CGM Increases Physical Activity in People with T2D

Multicenter, parallel design, two-phase (32 weeks in total), RCT conducted in 24 UK sites (FREEDM2)

- Phase 1: participants used CGM to aid self-management (compared to standard care glucose monitoring)

Results:

- During phase 1 (first 16 weeks), CGM use was associated with a mean ±SE 1.2±0.53 mg (p=0.027) increase in total activity due to a 12.7±6.1 min/day (p=0.039) increase in light-intensity physical activity compared to control.
- There were no other changes to physical activity or sleep at 16 weeks.

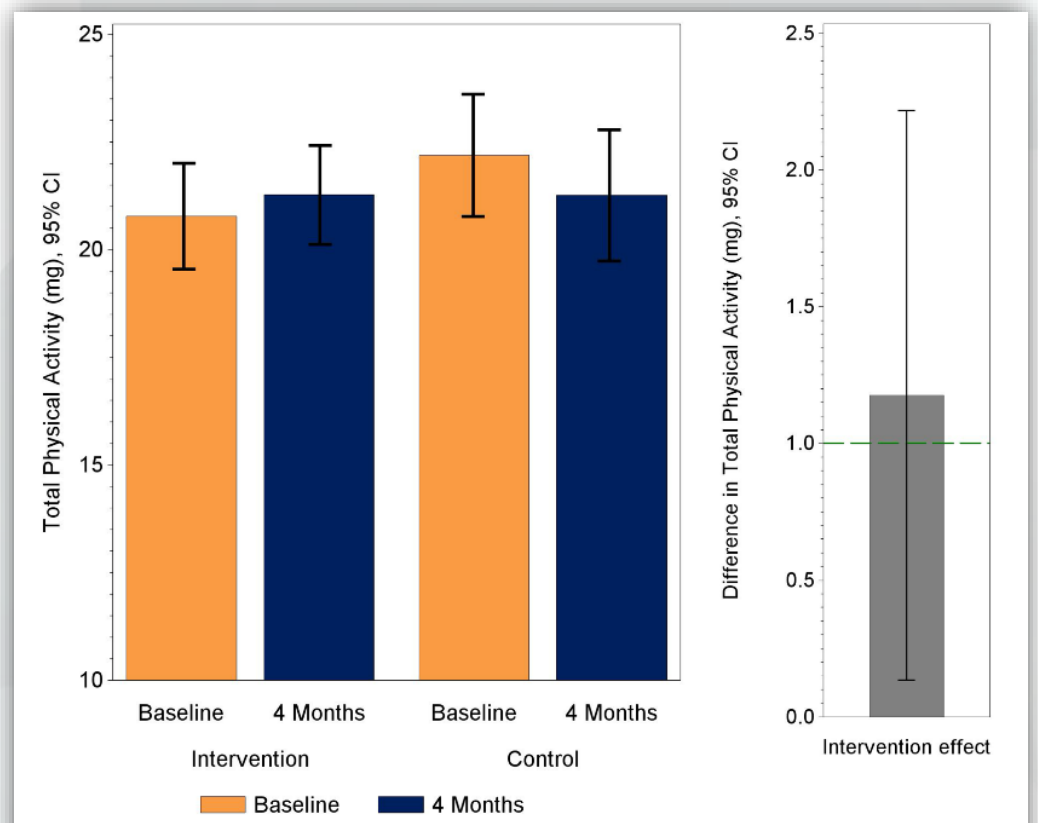


Figure: Change in physical activity during phase 1. Green dashed line represents the MCID threshold for the intervention effect, error bars represent 95% CI.

Cornerstone Medical Education

AACME® AMERICAN ACADEMY OF CME, INC.

Rowlands A, et al. *Diabetes Techno Ther*. 2026.

Low-Threshold CGM Intervention can Promote Meaningful and Lasting Behavior Change

Results: Of 942 participants, 657 completed the 2-week follow-up.

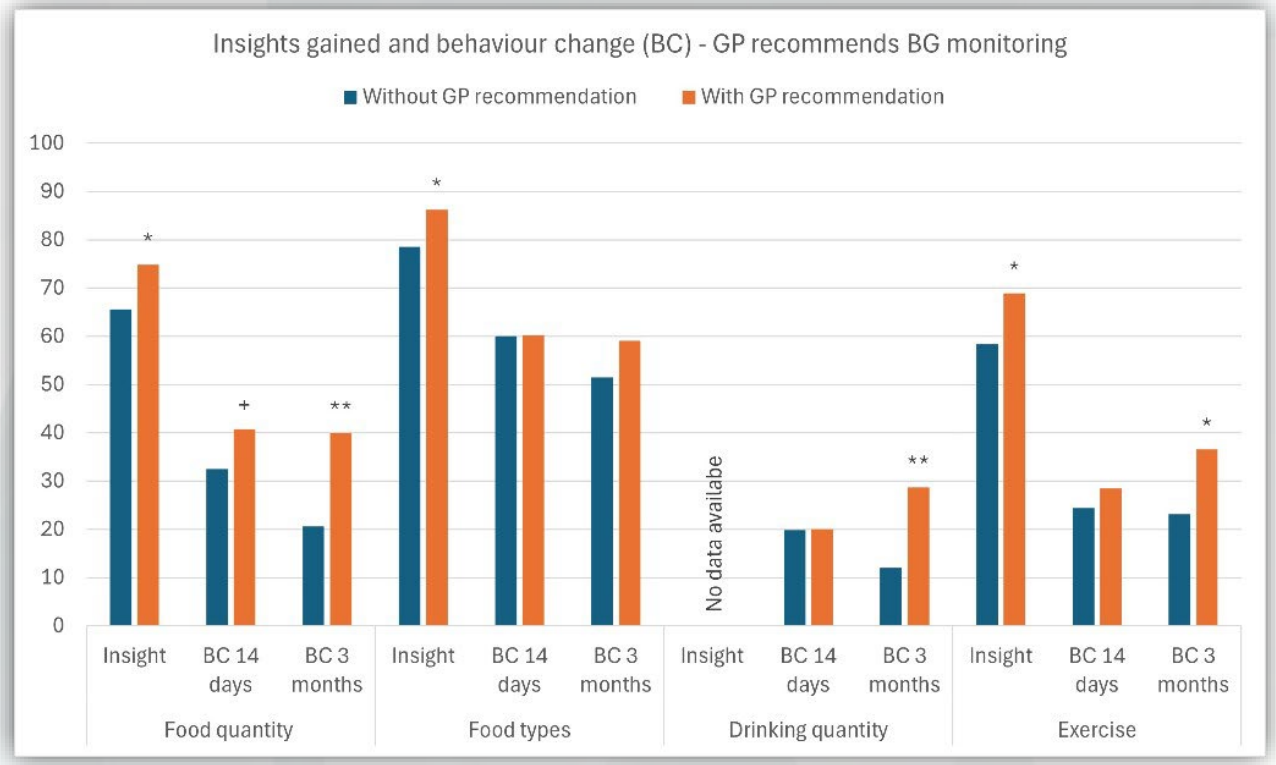
- Sensor adherence was high (81.4% wore for 14 days), and 80% used the app ≥6 times/day.
- On average, participants engaged with 5.5 of 8 app features.
- At 2 weeks, >90% reported gaining at least one new insight, and ~75% made at least one behavior change, such as adjusting their diet, portion sizes, drinking quantity, or physical activity.
- At 3 months, 67% sustained at least one change.
- Greater sensor/app engagement was linked to more insights and sustained change.

Mateu NCI, et al. *Diabetes Techno Ther*. 2026.

Low-Threshold CGM Intervention can Promote Meaningful and Lasting Behavior Change (cont)

Results:

- Participants whose GPs recommended glucose monitoring reported significantly more learnings and lifestyle changes, short- and long-term.
- Prior finger-prick monitoring did not predict outcomes.



Cornerstone Medical Education

AACME® AMERICAN ACADEMY OF CME, INC.

Mateu NCI, et al. *Diabetes Techno Ther*. 2026.

CGM Led to Improved Satisfaction, Quality of Life, Dietary Habits, Ability to Adjust Medications, and Hypoglycemia Confidence

Multicenter, parallel design, two-phase (32 weeks in total), RCT conducted in 24 UK sites (FREEDM2)

- Phase 2: CGM was used to enable clinician-driven medical management optimization
- Participants in the FSL3 group showed improvements in GMSS (including all subscales) ($p<0.0001$), UKDDQ ($p=0.0051$) and HCS ($p=0.0007$) scores at 16 weeks compared to the SMBG group
- Changes to the HFS-II and sleep satisfaction questions did not reach statistical significance at 16 weeks
- Qualitative interviews (N=41) across both phases revealed improved self-reported QoL, greater understanding of diabetes, and ability to adjust medications compared to the SMBG group.

Parameter	Baseline mean±SD		16 weeks mean±SD		Difference in adjusted means (vs control) mean±SE	P value (vs control)
	FSL3 (N=198)	SMBG Control (N=105)	FSL3 (N=198)	SMBG Control (N=105)		
n, non-missing	183	94	183	94		
GMSS						
Total scale[a]	3.2±0.6	3.3±0.7^	4.0±0.6	3.3±0.7^	0.8±0.08	<0.0001*
Openness	2.9±0.8	3.0±0.9^	3.8±0.8	3.1±0.8^	0.7±0.10	<0.0001*
Emotional burden	2.8±0.9	2.8±0.9^	2.2±0.8	2.8±0.8^	-0.6±0.11	<0.0001*
Behavioural burden	2.6±1.1	2.5±1.1^	1.6±0.7	2.5±1.1^	-1.0±0.10	<0.0001*
Worthwhileness	3.3±0.8	3.4±0.9^	4.2±0.8	3.4±0.8^	0.8±0.10	<0.0001*
UKDDQ, total score[b]	36.6±9.4	37.2±10.1	34.3±9.1	37.0±10.4	-2.3±0.81	0.0051*
HCS, mean score[c]	3.1±0.7 (n=184)	3.1±0.7	3.4±0.6 (n=184)	3.2±0.7	0.2±0.07	0.0007*
HFS-II, worry, total score[d]	16.5±16.0 (n=184)	20.4±17.3	13.9±14.2 (n=184)	17.9±16.3	-2.0±1.58	0.2080
Sleep satisfaction[e]						
Mean score	5.7±2.4	5.5±2.2	5.9±2.2	5.5±2.3	0.2±0.22	0.2970
Quantity	5.9±2.5	5.9±2.5	6.1±2.3	5.9±2.5	0.1±0.24	0.7034
Quality	5.5±2.4	5.2±2.3	5.7±2.4	5.1±2.3	0.4±0.23	0.1175

Table: Patient reported outcome measures. GMSS: Glucose Monitoring Satisfaction Survey, UKDDQ: UK Diabetes & Diet Questionnaire, HCS: Hypoglycemia Confidence Scale, HFS-II Hypoglycaemia Fear Survey. [a]Higher score indicates greater satisfaction; [b]Lower score indicates healthier behaviours; [c] Higher score indicates greater confidence; [d]Lower score indicates less fear; [e]Scored from 1 (least) to 10 (most) satisfied. ^:n=92, *: p<0.05.

Cornerstone Medical Education

AACME® AMERICAN ACADEMY OF CME, INC.

Leelarathna L, et al. *(#342) Diabetes Techno Ther*. 2026; Barnard-Kelly K, et al. *Diabetes Techno Ther*. 2026.

Consistent CGM Use Improved TIR and Empowers Patients

Surveyed US-based Dexcom G7 users with T1D and T2D on CGM use, wear gaps, and perceived impacts. Sensor glucose data were analyzed over 12 months, and a subset of participants completed qualitative interviews, thematically analyzed.

Table. CGM metrics by self-reported gap presence and diabetes status (N= 532).

	Type 2 Diabetes, No Insulin		Type 2 Diabetes, Insulin		Type 1 Diabetes	
	Self-reported gaps	No self-reported gaps	Self-reported gaps	No self-reported gaps	Self-reported gaps	No self-reported gaps
N	101	24	130	43	174	60
Time in Range 70-180 mg/dL, %	76 ± 21	79 ± 18	62 ± 20	67 ± 18	**65 ± 16**	**73 ± 15**
Mean glucose, mg/dL	154 ± 31	148 ± 26	173 ± 33	163 ± 27	**163 ± 28**	**152 ± 25**

Mean ± SD shown. CGM metrics are aggregates over 12 months of users' CGM wear tenure. **Bold** represents $p < 0.05$ between self-reported gap status within a diabetes status group (Wilcoxon rank test for time in range. T-test for mean glucose).

Cornerstone Medical Education

AACME® AMERICAN ACADEMY OF CME, INC.

Crawford M, et al. *Diabetes Techno Ther*. 2026.

Interprofessional Team Overview

Nurse coordinators	Social workers	Psychologists
Advanced practice providers	Dieticians	School nurses

Cornerstone Medical Education

AACME®
AMERICAN ACADEMY OF CME, INC.

CGM in T1D and Impaired Awareness of Hypoglycemia (IAH)

Assessed by Clarke, Gold and Pedersen-Bjergaard methods, IAH = ≥2 positive measures.

Participants reported hypoglycaemic episodes over 14 days, including detection method (asymptomatic with alarm, symptomatic with alarm, symptomatic without alarm, coincidence, or unknown), independent of glucose level.

Results (N=205, median age 59 years, 67% men, with 85% using low glucose alarms

- Of these, 72% had normal (NAH), 18% intermediate and 10% impaired awareness.
- Median self-reported hypoglycaemic episodes did not differ between the awareness groups.
- The proportion of asymptomatic episodes detected by alarm was higher in IAH (74%) than in NAH (23%, $p<0.0001$) whereas symptomatic episodes without alarm were lower (3% vs. 32%, $p=0.0002$)

Demir C, et al. *Diabetes Techno Ther*. 2026.