

Dexcom Continuous Glucose Monitoring in Diabetic Foot Disease

A Real-World Observational Study

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Diabetic Foot Study Group (DFSG) Meeting

40 patients | 6 months follow-up

BACKGROUND

Diabetic foot disease (DFD) carries a high risk of amputation and mortality, driven partly by suboptimal glycaemic control. Continuous glucose monitoring (CGM) provides real-time glucose data that may support improved management. We present a real-world evaluation of Dexcom CGM in patients with active DFD attending a specialist NHS diabetic foot clinic.

METHODS

An observational study was conducted at a single tertiary diabetic foot clinic. Patients with active DFD were offered Dexcom CGM and followed for up to six months. Outcomes included Time in Range (TIR), HbA1c, LDL cholesterol, hospital admissions, antibiotic courses, and foot ulcer healing status.

COHORT AT A GLANCE

40

Patients enrolled

64.8

Mean age (years)

80%

Male

97%

Type 2 diabetes

91%

Insulin-treated

35%

Active CGM engagement

Attrition detail: 32.5% of patients discontinued CGM use and 30% never uploaded data during follow-up.

TABLE 2 · BASELINE HbA1c: ENGAGED VS DECLINED

Characteristic	CGM Engaged	Declined CGM	p-value
n (with HbA1c data)	36	9	—
Mean baseline HbA1c (%)	9.6%	9.2%	0.713
SD	±2.3%	±2.6%	—
Median HbA1c (%)	8.9%	8.4%	0.542†
Range (%)	6.4–14.9	6.6–14.4	—

No significant difference in baseline HbA1c between groups (p=0.713); attrition was not driven by differential glycaemic severity.

RESULTS

Mean HbA1c improved from 9.5% to 7.9% at three months, and mean TIR rose from 48.7% to 58.2%, though both remained below recommended targets (HbA1c ≤7.5%; TIR ≥70%). LDL cholesterol showed no significant change (2.06→1.93 mmol/L), remaining above NICE high-risk targets. Hospital admissions fell by 55% (29→13 episodes) and foot ulcer outcomes were favourable: 70% of patients healed or were actively improving at last review, with 10 patients fully discharged from the foot clinic.

TABLE 1 · KEY CLINICAL OUTCOMES

Outcome	Baseline	3 Months	Change
HbA1c — mean (%)	9.5%	7.9%	↓ 1.6%
Time in Range — mean (%)	48.7%	58.2%	↑ 9.5 pp
TIR at 6 months — mean (%)	—	—	52.3%
LDL cholesterol — mean (mmol/L)	2.06	1.93	↓ 0.13
Hospital admissions (total)	29	13	↓ 55%
Antibiotic courses (total)	43	53	↑ 23%*
Foot ulcers healed / improving	—	21/29 (72%)	—
Fully discharged from foot clinic	—	10/29 (34%)	—

* Antibiotic-use increase driven by patients with complex ongoing infections and enhanced monitoring prompting earlier treatment.

↓ 55%

Fewer hospital admissions during Dexcom monitoring

70%

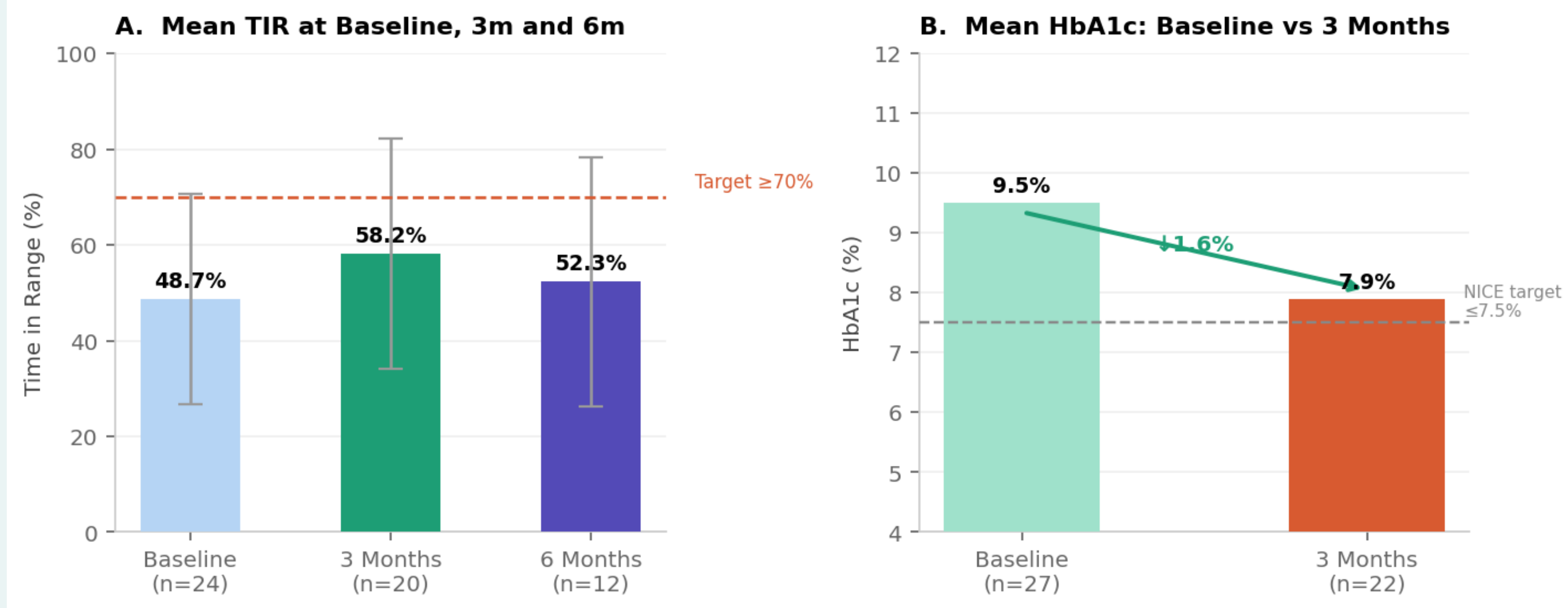
Foot ulcers healed or actively improving

Keywords: Diabetic foot disease · CGM · Dexcom · Time in Range · HbA1c · Foot ulcer healing

CONCLUSIONS

CGM use in diabetic foot disease is feasible and associated with meaningful improvements in glycaemic metrics and a substantial reduction in hospital admissions. Foot ulcer healing rates were encouraging. However, patient attrition was high, and lipid management remains suboptimal in this complex population. Prospective controlled studies are needed to isolate the effect of CGM from intensive multidisciplinary follow-up.

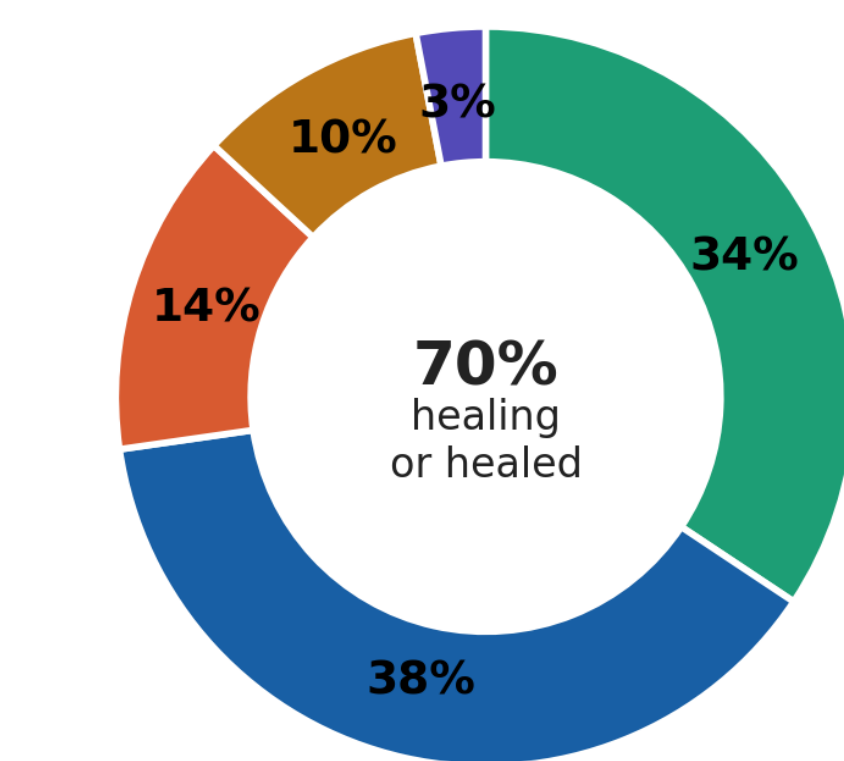
FIGURE 1 · GLYCAEMIC OUTCOMES



Mean TIR at baseline, 3 and 6 months vs. consensus target ≥70% (A). Mean HbA1c at baseline vs. 3 months vs. NICE target ≤7.5% (B).

FIGURE 2 · FOOT ULCERS & ADMISSIONS

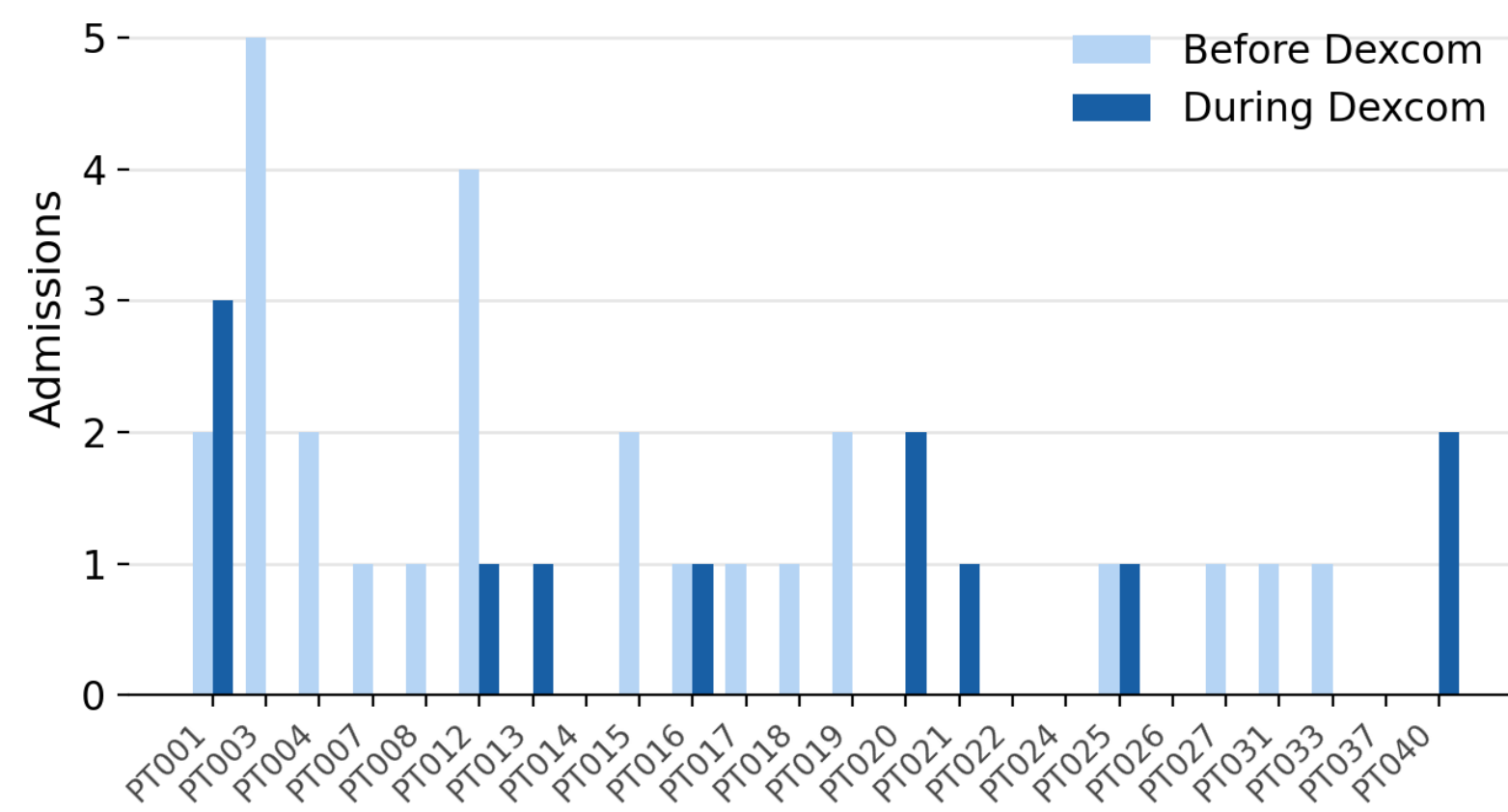
C. Foot Ulcer Outcomes (n=29)



Healed & Discharged
Active Healing
Active Infection
Stable / Static
Complex / Charcot

D. Hospital Admissions: Before vs During

Total: 26 Before → 12 During Dexcom (−54%)



NOTE

All patient identifiable data has been anonymised. This work represents a service evaluation / quality improvement project.