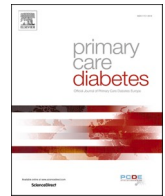


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## Freestyle libre use in people with type 2 diabetes using basal-bolus insulin is associated with improved glycaemic control: A real-world analysis

## ARTICLE INFO

### Keywords

Freestyle libre  
Flash glucose monitoring  
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Dear Editor,

We read with great interest the article by Kant et al., ‘Real-time continuous glucose monitoring improves glycemic control and reduces hypoglycemia: Real-world data’, published in *Primary Care Diabetes* [1]. In their retrospective study, adults with type 1 diabetes ( $n = 47$ ) or type 2 diabetes (T2D) ( $n = 44$ ) treated with insulin, used the Dexcom (G5/G6) continuous glucose monitor (CGM) for at least 3 months. The mean HbA1c improved by 0.42–0.54 %, although individuals with a baseline HbA1c  $> 7.0$  % improved by 0.75–0.89 % without greater hypoglycemic risk. These data suggest CGM should be considered for all insulin-treated patients, especially those with poor control.

Following an economic evaluation, guidance in Wales supports freestyle libre (FSL) use in people with insulin-treated T2D [2]. Whilst NICE recommend CGM for all people with T1D [3], CGM use in people with T2D is relatively limited in the UK [4]. Therefore, we undertook a service evaluation of FSL use in people with T2D using basal-bolus insulin across three hospitals. Sixty-six individuals were retrospectively identified, with mean age  $58.9 \pm 11.0$  years, mean duration of insulin use  $4.9 \pm 1.2$  years and mean body mass index  $33.6 \pm 5.6$  kg/m<sup>2</sup>. Within 12 months before starting FSL, their mean HbA1c was  $83.1 \pm 21.8$  mmol/mol [ $9.7 \pm 2.0$  %] which improved to  $72.2 \pm 23.6$  mmol/mol [ $8.7 \pm 2.2$  %] following a mean  $7.4 \pm 3.1$  months after commencing the FSL, generating a mean HbA1c reduction of 10.9 mmol/mol [1.0 %] ( $p < 0.001$ ).

We observed a greater decrease in the mean HbA1c in our cohort, than reported by Kant et al., though important differences exist between the studies. Firstly, all patients in our study had T2D, whilst 48.4 % of the cohort reported by Kant and colleagues had T2D. Secondly, patients in our cohort had a greater baseline HbA1c ( $9.7 \pm 2.0$  % vs  $8.16 \pm 1.51$  %), and greater reductions in HbA1c are associated with any diabetes-related intervention in people with a higher HbA1c. Finally, we used FSL in our study compared with the Dexcom G5/G6 in the study by Kant et al. However, this difference is unlikely to have significant impact on glycaemic outcomes.

Nevertheless, a HbA1c improvement of 0.5 % or more is usually defined as clinically meaningful as it is associated with reduced cardiovascular risk [5]. Given that our observations and those of Kant and

colleagues exceeded this reduction in HbA1c, we call for further economic evaluation to support the greater availability of CGM in people with insulin-treated T2D.

### CRediT authorship contribution statement

**DMW:** Formal analysis, Methodology, Project administration, Writing – original draft, Writing – review & editing. **EC:** Data curation, Investigation. **SA:** Data curation, Investigation. **MRL:** Data curation, investigation. **MC:** Data curation, Investigation. **RR:** Data curation, Investigation. **SCB:** Methodology, Supervision. **JWS:** Methodology, Supervision. **TM:** Conceptualization, Formal analysis, Methodology, Supervision.

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