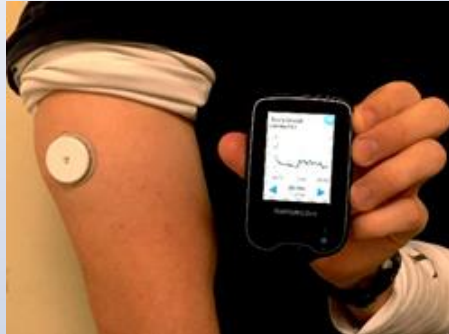


# “Glucose excursion in Type 1 diabetes audit combining Abbott Libre Flash Glucose Monitoring and Cellnovo insulin pump”

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## Introduction

The authors aimed to explore Glucose Excursions (GE) in patients with Type 1 diabetes (T1D) who use an insulin pump. Patients were seen in a nurse led insulin pump clinic and volunteered to participate in this audit.



## RESULTS

Mean 247.5hrs (total possible 336hrs) data collected; participants scanned between 1-49 times per day (mean 15.8). All participants experienced GE to varying degrees, 80% had blood glucose levels >10mmols during a glucose excursion. The range of time spent outside target range (4-7mmols) varied between 8.6-78% of the 14 days (mean 40.8%).

Participants interaction with their insulin pump varied between 0-13 times per day (mean 6.6). The most common precipitating factor for GE was a meal bolus up to 1 hour before GE. Data showed that those who scanned and interacted with their LFGM and insulin pump had the lowest frequency and severity of GE.

## METHODS

10 patients were audited who are using a Cellnovo insulin pump. Each was given an Abbott Libre Flash Glucose Monitor (LFGM) which monitors the interstitial glucose levels every 15mins for 14 days and is able to give a complete glucose profile over a 24 hours period. Once the LFGM data was collected, it was superimposed over the Cellnovo pump data to produce a complete picture of GE and the factors contributing to GE.

FIGURE 5 - RESULTS OF LFGM & CELLNOVO

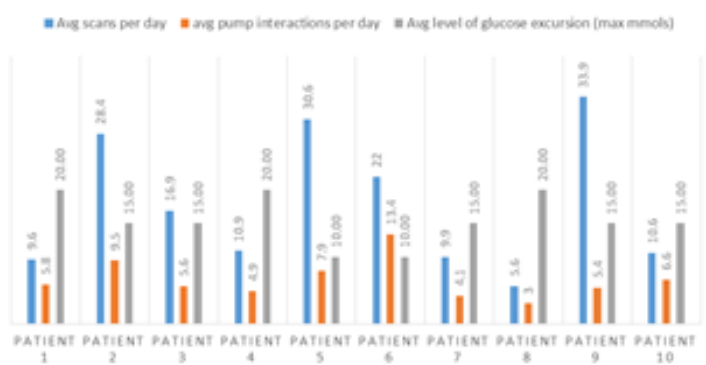
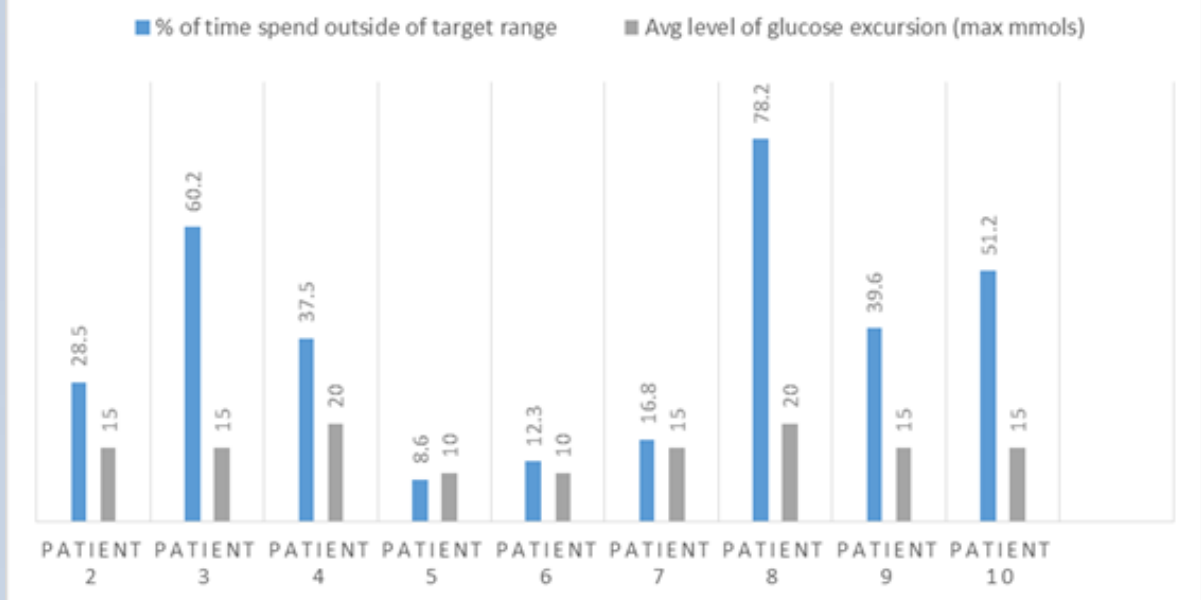


FIGURE 6 - GLUCOSE EXCURSIONS



## CONCLUSIONS

FGM combined with insulin pump therapy appears to reduced GE in T1D for those who interacted the most with both devices.

While the study results are positive, its small scale has demonstrated a need for further studies.