

# Digital transformation of diabetes care

P Evans<sup>1</sup>; L Baller<sup>1</sup>; V Lewis-Jenkins<sup>1</sup>; A Evans<sup>2</sup>; B Albiez Piper<sup>2</sup>; C Kufaa<sup>2</sup>  
1- Department of Diabetes, Hummingbird Centre, Royal Glamorgan Hospital (RGH), Cwm Taf Morgannwg University Health Board (CTMUHB); 2- Medtronic-Diabeter

## Background

Cwm Taf Morgannwg University Health Board (CTMUHB) serves one of the most deprived populations in Wales. Access to new technology is lower in deprived communities (1). The Health Board is committed to implementing the NICE TA hybrid closed loop (HCL) guidance 2023 (2), breaking down barriers to innovative therapies. Transformation of traditional care models, utilising new technologies, is key to improving clinical effectiveness, service efficiency and capacity.

## Methods

CloudCare, an agnostic data monitoring and reporting system, is a key contributor to the success of the Dutch Diabeter model, widely held as an exemplar of Value Based Healthcare. Working in partnership with CTMUHB, Medtronic-Diabeter have deployed CloudCare in the UK for the first time. The system uploads glucose data from any continuous or flash glucose monitoring system and is compatible with all HCL devices.

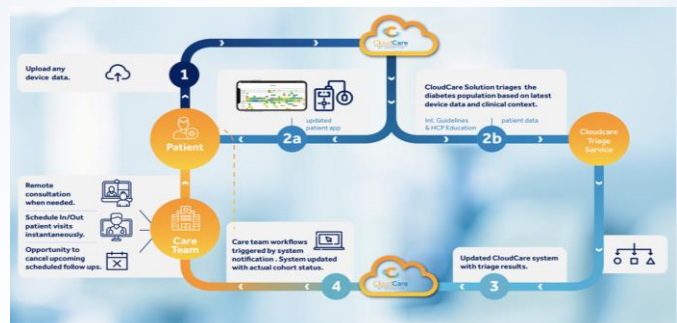
CloudCare uploads glucose data daily. It is collated into a “heatmap” (Figure 1), which is made available to patients via a CloudCare app on their phone (process 2a Figure 2), empowering them to engage with their glycaemic control.

Figure 1



The data is centrally reviewed and triaged (process 2b Figure 2) according to criteria agreed with the hosting diabetes unit. Data identified as being of concern is forwarded to the care team where it is reviewed and actioned (process 3 Figure 2).

Figure 2



54% (432 people) of the Type 1 diabetes population currently managed at the Hummingbird Centre, RGH are on HCL. 374 were entered into the 12-month pilot as this started in July 2025.

Key performance indicators to be measured at baseline and 12 months, include PROMS, PREMS, acute admissions due to diabetes, glycaemic control indices, HCP contact, and changes to clinic capacity. In addition to the planned analyses, data on glycaemic indices and clinic capacity have been analysed at 6-months and are presented below.

## Results

Complete glycaemic datasets were only available for 142 participants. The reduced number reflected the inability to access all of the data and the number of people with a complete data download available from CloudCare on the day of the 6-month data analysis.

Data from the 142 participants recorded an overall improvement in glycaemic indices, with a non-significant ( $p=0.064$ ) 2% increase in Time In Range (TIR); but significant ( $p=0.009$ ) improvement in eGMI (Figure 3). Clinic capacity also increased significantly ( $p<0.0001$ ) by over 60% (Figure 4).

Figure 3

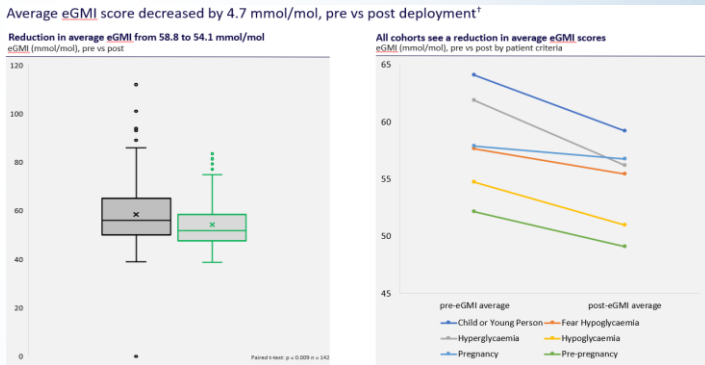
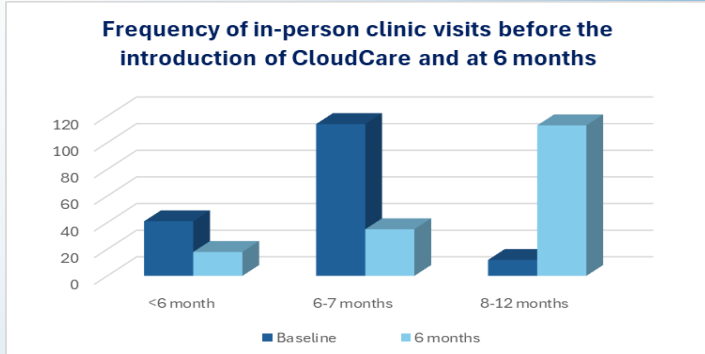


Figure 4



## Conclusion

Improving value requires enhancing one or more outcomes without raising costs or lowering costs without compromising outcomes. Provided CloudCare can maintain the recorded benefits throughout the 12-month pilot it will have fulfilled its Value Based Healthcare potential, improving both clinical outcomes and service efficiency.

## References

1 Fallon C, Jones E, Oliver N, Reddy M, Avari P. The impact of socio-economic deprivation on access to diabetes technology in adults with type 1 diabetes. Diabet Med. 2022;39(10):e14906.  
2 NICE TA 943. Hybrid closed loop systems for managing blood glucose levels in type 1 diabetes. December 2023.