Glycaemic outcomes associated with Omnipod DASH use in the real-world: results from the Association of British Clinical Diabetologists (ABCD) Omnipod Worldwide Audit

TSJ Crabtree[1,2]; N Hasan[1]; DM Williams[3]; ER Gatdula[4]; J Varghese[5]; G Modgil[6]; REJ Ryder[7]; EG Wilmot[1,2] on behalf of all ABCD Omnipod Audit Contributors

1. University Hospitals of Derby and Burton NHS Trust, Derby, UK; 2. University of Nottingham, Nottingham, UK; 3. Swansea Bay University Health Board, Swansea, UK; 4. Llandough Hospital, Llandough, UK; 5. Stockport NHS Foundation Trust, Stockport, UK; 6. Somerset NHS Foundation Trust, Somerset, UK; 7. Sandwell and West Birmingham Hospitals NHS Trust, Birmingham, UK

Introduction

The ABCD Omnipod@ Worldwide Audit launched in 2021 with the aim of capturing routine clinical outcomes from users in the real-world. This analysis reports glucose outcomes, including comparisons between pump-naïve and established pump-users starting on Omnipod DASH® Insulin Management System.

Evidence already exists showing similar outcomes between tubed and tubeless pump in the real-world[1]. The aim of this analysis was to assess real-world outcomes association with Omnipod in the UK.

Methods

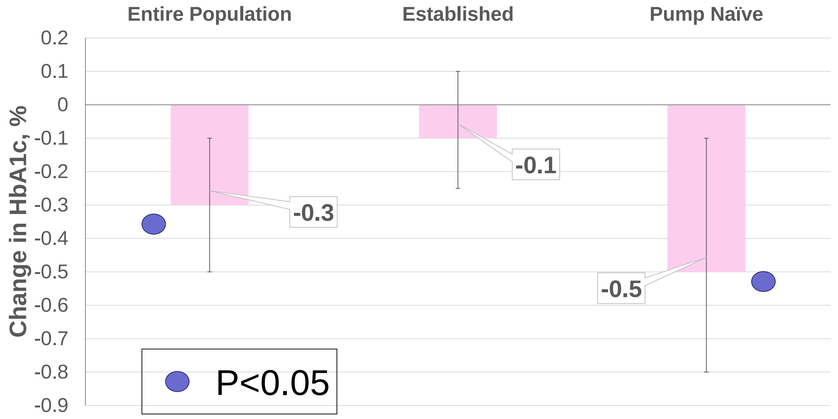
Data were extracted from the ABCD audit tool where data is recorded securely and anonymously from participating centres. Individuals were included in the analvsis it relevant baseline and follow-up data were available. Change in HbA1c. time-in-range (TIR. 3.9-10mmol/L). time below range (TBR. <3.9mmol/L) and total daily dose of insulin were assessed using paired T-tests. For glucose outcomes. stratified analyses were performed to compare the outcomes between those new to pump therapy ("new") and those already established ("established").

Table 1. Baseline characteristics of observed population

Characteristic		n=235
Mean age, years ± SD		36 ± 16.5
Male, %		35.0%
Mean diabetes duration, years ± SD		21.7 ± 14.9
Mean Hba1c,	% ± SD	8.1 ± 1.4
	mmol/mol ± SD	64.9 ± 15.1
Type 1 diabetes, n (%)		235 (100)
Mean total daily dose, units ± SD		46.2 ± 22.5
New to pump therapy, %		34%

BMI, body mass index; eGFR, estimated glomerular filtration rate; BP, blood pressure; IQR, interquartile range; SD, standard deviation

Figure 1. Baseline and follow-up HbA1c (%) across the population and in pump naïve and established pump users.



Results

In total, 235 individuals had sufficient baseline and follow-up data for inclusion. Baseline characteristics are summarized in **table 1**, median follow-up was 2.3 years (IQR 1.2-3).

Across the whole population HbA1c reduced by 0.3% (95%CI 0.1, 0.5; P<0.01). Stratified by previous therapy, HbA1c reductions were statistically significant in the "new" group (-0.5%; 95%CI -0.1, -0.8; P=0.01). TIR, TBR and HbA1c levels were maintained in those in the "established" group. The changes are shown in **figure 2.** Total daily dose decreased from 41.4units to 36.9units (-4.4; 95%CI 0.8, 8.1; P=0.018) between baseline and follow-up. Of those asked, 82/84 (97.6%) stated Omnipod DASH had improved their quality of life and 83/86 (96.5%) would recommend the system to other people with diabetes.

Conclusions

In individuals new to pump therapy, Omnipod DASH is associated with clinically meaningful reductions in HbA1c. Almost all individuals noted improved quality of life. Insulin requirements also reduced. Individuals switching to Omnipod DASH from other pumps maintained previous HbA1c levels, TIR and TBR.

COI: TSJC has received speaker fees and/or support to attending meetings from NovoNordisk, Insulet, Dexcom, Lilly, Abbott Diabetes Care and Sanofi

References

1. Leelarathna, Lalantha, Stephen A. Roberts, A. Hindle, K. Markakis, T. Alam, A. Chapman, J. Morris, A. Urwin, P. Jinadev, and M. K. Rutter. "Comparison of different insulin pump makes under routine care conditions in adults with type 1 diabetes." *Diabetic Medicine* 34, no. 10 (2017): 1372-1379.