

# The Cellnovo Online Portal: Access to Real-Time Data Facilitates Increased Self-Management

Peter Kelly RN<sup>1</sup>, Sally Read RN<sup>2</sup>, Patrick English MB ChB, FRCP, MD<sup>3</sup>

1. Diabetes Specialist Nurse, Diabetes Centre, Derriford Hospital, Plymouth, Devon, UK
2. Inpatient Diabetes Specialist Nurse, Diabetes Centre, Derriford Hospital, Plymouth, Devon, UK
3. Consultant, Plymouth Diabetes Service, Derriford Hospital, Plymouth, Devon, UK

## Background

Diabetes does not discriminate; it affects every age group, gender and race. It confers a cost to the NHS, to the economy and more importantly, it impacts upon the life of people living with it. People with Diabetes experience emotional, physical and social challenges. As an adjunct to an evaluation of the Cellnovo Mobile Diabetes Management System's ability to ameliorate blood glucose variability (BGV) and improve HbA1c1, we sought formal feedback from users as to whether or not they felt that the real-time data available from the System's Online Platform coupled with 'as and when required' education and support, improves their quality of life. Four Cellnovo pump users agreed to provide feedback on their experience via an open-ended questionnaire. The diabetes nurse specialist (DNS) provided a clinical reflection.

## Method

Prior to starting on the Cellnovo System, the DNS provides two four-hour educational sessions about the System, its various functions and management applications and how the data can help them to make regimen or lifestyle adjustments. The DNS and Cellnovo support team also provide on-going 'as and when' required support via mobile phone or email. Each patient is seen in the clinic as frequently as they require.

- A short, open-ended questionnaire was devised to capture user views
- Data pertaining to the food library, insulin taken and daily activities were captured by the System's handset and reviewed at days 7, 14, 30 & 90. This data is colour coded, helping the patient to easily identify issues related and take action as appropriate



The Cellnovo Online Portal

## Results

Four patients responded to the questionnaire, one of whom was a diabetes specialist nurse. The length of time living with (diagnosed) Type 1 diabetes ranged from 24 years to 44 years. Stated reasons for trying the system were:

- *'Had seen it at Diabetes UK and was very impressed. Liked the idea of a tubeless, small pump.'* (Patient 1)
- *'I was encouraged by the diabetes nurse specialist...'* (Patient 2)
- *'...I wanted a pump that was small and could be worn on the skin rather than in a case with a tube.'* (Patient 3)
- *'It was suggested that I might benefit from using an insulin pump and after looking at them the Cellnovo system looked to suit me best.'* (Patient 6)

All four liked the System for its small, discreet size, access to results and the carbohydrate intake monitor

- One stated *'...I have established improved blood glucose control...'*
- Further verbal feedback indicated quality of life improvements such as better glycaemic control and fewer hypo/hyperglycaemic episodes.

For the clinician the System:

- Enables continuous monitoring and review of user data and allows regimen changes, and troubleshooting via email/phone, thereby reducing clinic visits
- Allows examination of user activity and its impact on glycaemic control
- Enables HCP to support user to self-manage as much as they wish

Because the system allows the HCP to remotely view glycaemic control and management in real time, regimen/lifestyle adjustments can be made proactively and remotely.

## Conclusion

The unique real-time data tracking function of the Cellnovo System allows users to take control of their diabetes in partnership with health care professionals. While it is not possible to infer a trend from the simple feedback, it is testament to the system that despite initial concerns and issues, all four users surveyed continued using it. This sentiment is reflected by other users.



## References

1. Kelly P. Achieving effective glycaemic control using an insulin micro-pump. *British Journal of Community Nursing*. 2017. 22; 2:66-75