Mobile Technology System for Type 1 Diabetes Patient using Minimed 640g: A case report

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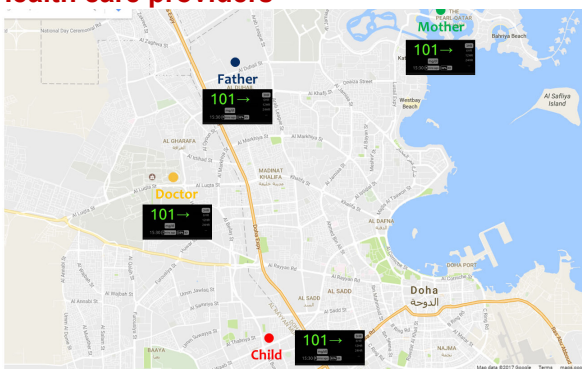
BACKGROUND:

Type 1 Diabetes (T1D) is challenge for both patients and physicians. New era of technology with web-based and cloud solutions are offering real-time (RT) sharing of patient's glucose values. There is no commercially available mobile technology solution to access RT data of Continuous Subcutaneous Insulin Infusion (CSII) for both glucose and insulin values.

On-Line data transfer using Night scout platform

We are presenting a patient with T1D using Minimed 640g with RT glucose and insulin data share using the Nightscout Project (web based mobile technology system).

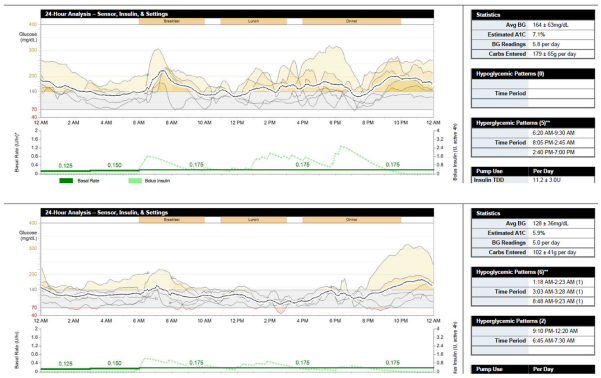
Data share in Real-Time between Family and Health care providers



CASE REPORT:

A 7-year-old girl with T1D for 9 months started MiniMed 640g (Medtronic, Northridge USA). The parents were eager to monitor glucose control very closely, if possible using RT monitoring. The Insulin and glucose data from CSII were transferred to night scout account using Bayer Countour Next Link 2.6 (Bayer, Germany) via OTP cable on Android mobile phone with 3G network. Parents were able to monitor glucose values in RT on their mobile phones, when the patient was at school, sleeping and sport activities. Patient experienced significant improvement in HbA1 of 6.8% in the next 6 months. Parents were satisfied and can closely monitor their child.

Improvement in glucose profile using Real-Time Share of insulin pump data



CONCLUSION:

Mobile technology for health using web based cloud solutions may have beneficial effects on glycemic control and quality of life. Case controlled series and further studies on larger population are needed to confirm our findings.

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