

Diabetes Connected Health: A Pilot Study of a Patient- and Provider-Shared Glucose Monitoring Web Application

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Abstract

Background:

Real-time sharing of blood glucose results with providers could improve communication and lead to more timely medication titration. New technology platforms are available to support the delivery of innovative models of care delivery.

Methods:

In the Diabetes Connected Health (DCH) pilot study, patients with diabetes received access to an online application that stored and graphed glucose readings uploaded from a standard glucometer. Both patients and providers had access to this Web site, where data could be viewed, analyzed, and discussed. To examine the impact of the DCH program, we assessed adoption of the program, patient and provider satisfaction, frequency of use, and changes in glucose levels over a period of 3 months.

Results:

The mean age of the 7 pilot participants was 51 (range 35–65). Participants sent in an average of 50 readings in Month 1 and 38 readings in Month 3 and made, on average, 6 comments in Months 1 and 12 comments in Month 3. The mean blood glucose range decreased in Month 3 versus Month 1 (141.1 and 146.5, respectively). Self-reported HbA1c fell from 6.8% at the start of the study to 5.8% at the end. Five/seven participants described the site as excellent or good. Qualitative data analysis highlighted key benefits of the program as well as areas for improvement.

Conclusions:

This pilot study of a shared glucose monitoring Web application was well received by patients. Programs like this may lead to improvements in the quality of clinical care delivered to people with type 2 diabetes.

J Diabetes Sci Technol 2009;3(2):345-352

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Abbreviations: (BMG) Bulfinch Medical Group, (DCH) Diabetes Connected Health, (EMR) electronic medical record

Keywords: connected health, diabetes, internet, pilot

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