



MEDICINE 2.0 CONFERENCE REPORT

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Figur 1: Screenshot of my presentation on Sunday 18th Sept 2011 (in red circle), being introduced to the audience by the session chair. See www.diabetesbuddy.org/taridzo for full video (soon).

Medicine 2.0 report

Why attend this conference?

First, I would like to express my gratitude to the NUUG Foundation for awarding me the grant. I would like to assure the awarding committee that the grant went a long way in benefiting my academic studies directly as well as my research group. In addition I also helped spread the word about the mission of the foundation and its generous grants.

Turning now to the conference; it is associated with a leading eHealth journal, the Journal of Medical Internet Research (JMIR). Having my abstract (see abstract on last page) accepted for presentation at this conference also meant I had a chance to disseminate my research in high impact outlets, see link: <http://www.jmir.org/2011/3/e65/>

Another important objective was to meet, and mix and mingle with the leading researchers in the field. I also aimed to make contacts with research groups to develop a base for future collaboration, for example, when I need to take study stays abroad and research visits.

What I got

After my presentation (soon available on my blog <http://www.diabetesbuddy.org/taridzo>) I got several interesting questions, which shows there was great interest in the topic. The conference ran 3 parallel sessions and my session was well attended. I also received complements and business cards from several interested delegates.

The most extraordinary coincidence was that the developers of some of the applications that I had reviewed were present at the conference. Given that it was neither a diabetes nor iPhone developer's conference, the odds were pretty low. This was a pleasant surprise because I had in fact given their applications great reviews unwitting of the fact. I had the pleasure to meet Tom Xu, the GlucoseBuddy developer, whose application I had awarded the best review in my presentation.

One of the most valuable experiences was having first hand talks from business experts who had actually commercialized some of the eHealth and social media concepts, or had put the systems into routine use successfully. The conference was not only focused on academic research results and open-access publication models, but also sought to gain experience about working business models for eHealth systems.

Benefits to my research group

The contacts that I made at the conference will be available to my research group and we use these for planning research collaborations. I met with some of the developers of GlucoseBuddy and Bant, both leading iPhone diabetes applications. I should expect that in the coming months we will share ideas as my group and I also prepare to port the current Windows Mobile diabetes application to the Android platform.

I also had a chance to see some hardware based solution, as yet unpublished. Whereas there are vendor restrictions on the use of 3rd party Bluetooth sensors, some researchers are using hardware extensions to the iPhone, for example. Follow-up on this and other interesting innovations will benefit my research group. In addition, my supervisor who has a sabbatical at University of California, Davis, also happened to attend this conference. An interesting observation is that the new Medicine 2.0 added mobile health applications to the main key words for future conferences, and I can only assume my work as well as that of many other attendees helped influence and shape this future direction.

Trivia

It was my first time in USA and I found the environment a little difficult to navigate. I stayed in a good hotel organized by the conference at highly discounted rates. The food at both the hotel and the conference was delightful, and we had a sumptuous reception diner. The conference was well-organized with a state-of-the-art venue. Almost all of the presentations were interesting, both for the academic and entertainment value.

On the downside was the amount of time I had to spend 35,000 feet above sea level, but even for someone with a phobia for flying like myself, that was a small price to pay for this interesting conference trip. I recommend the 2012 version of the conference at Harvard University, Boston, see <http://www.medicine20congress.com>

Review of iPhone Applications for Diabetes Self-Management

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Background We are experiencing an increasing growth in interest for mobile health (mHealth) applications for self-management of blood glucose (SMBG). In spring 2009, we found 60 diabetes applications on iTunes for iPhone and as of February 2011 the number has grown over 400 research on diabetes mHealth applications. For example, the impact emergent technology such as social media has on further development of use cases is largely unexplored.

Objectives To study the salient characteristics of mobile applications for diabetes on the Norwegian market, using a popular mobile platform; Apple's iPhone.

Methods We searched Norwegian market iTunes Store for diabetes applications using search terms "diabetes" and "glucose". The inclusion criterion was applications that featured a component for blood glucose tracking. We excluded applications for healthcare professionals and non-English applications. Search hits were 260, of which 49 met the selection criteria and were installed on an iPod for further analyses. The inclusion comprised 19 free and 30 paid applications, where the mean and modal price was the equivalent of 2 € and 1.40 €, respectively. We studied the following features: (1) self-monitoring (blood glucose, physical activity, diet, weight, insulin and blood pressure), (2) functional integration of social media, (3) data export and (4) synchronization with Personal Health Records (PHR) or portals.

Results Tools for tracking insulin injections were present in 33 of the 49 selected applications, although most neglected making references to Type 1 or Type 2 diabetes, or insulin pump technologies. Just over half of the applications had some form of diet management; either by tracking carbohydrates intake or making meal suggestions. Weight tracking and physical activity had each 20 and 19 applications, respectively. Only two of the eight applications with an educational module had personalized education or advice, 7 had reminders, while 11 had some form of integration with social media. Four applications had a component for synchronizing with PHRs or web portals. No application had visible effort towards patient privacy and safety beyond disclaimers and warnings about potential risks with using the application.

Conclusion While there seem to be a wide selection of applications available for people with diabetes, this study shows the hype about social media has not yet translated to seamless functional linking of SMBG tools to the social Web in many applications. Web 2.0 tools can provide peer support and personalized education, both of which are recommended for SMBG, especially for people with Type 2 diabetes not using insulin. ZipHealth is a good an example of a functionally integrated application, where specialist functionality like PHR is interfaced with specialist providers such as Microsoft HealthVault or Google Health. Preliminary evidence seems to point to a future with increased use of wireless sensors, usage of PHR in augmenting social engagement with peers and personalizing health education, but this study has shown these concepts are still seldom recognized in iPhone SMBG applications in the Norwegian market.