How to choose among the many diabetes apps and online resources?



D. Larbi¹, K. Antypas^{1,4}, M. Bradway^{1,2}, P. Randine^{1,3}, E. Gabarron¹, E. Årsand^{1,3}

¹Norwegian Centre for E-health Research, University Hospital of North Norway, Tromsø, Norway ²UiT The Arctic University of Norway, Department of Clinical Medicine, Tromsø, Norway ³UiT The Arctic University of Norway, Department of Computer Science, Tromsø, Norway ⁴SINTEF, Oslo, Norway

Introduction

Apps and online resources for diabetes self-management are overwhelmingly diverse. Therefore, the task of choosing the most trustworthy and best resources for one's needs and preferences is challenging. We present interview results regarding how various stakeholders choose diabetes self-management resources.

Methods

We conducted semi-structured interviews with stakeholders (n=11) in Norway (2 participants with diabetes; 2 informal caregivers (e.g. relatives); 2 researchers; 2 policymakers; 2 healthcare professionals (HCPs); 1 developer) and analysed responses using thematic analysis. We asked how they choose apps and online resources to use, recommend or develop, including which characteristics they consider favourable.

Results

Policymakers and HCPs prefer apps and online resources with quality-assured information. Researchers choose apps based on scientists' and developers' recommendations, focusing on apps that function on multiple platforms and contain quality content. The developer chooses efficient and easy-to-use apps based on reports on trends and projects. Informal caregivers were influenced by peer recommendations, focusing on apps with remote-monitoring and tailorability. Participants with diabetes choose resources that address their self-management foci; do not request access to private information; and provide automatic data-recording and blood-glucose graphs.

Conclusion

The various stakeholders have different foci when choosing diabetes apps and online resources. Researchers and health authorities should create and disseminate evidence-based guidelines on stakeholder-specific platforms to assist stakeholders to develop, recommend or use validated and trustworthy self-management resources.



"First and foremost the validity of the algorithm behind [an app]...should be visible and transparent... I can't sit [at the clinic] and recommend things that I'm not completely certain are quality assured, so that means it must be reasonably official."

"As a scientist, I'm more concerned with the quality of the content...[and] it should be allowed to either put it in the apps or have a link ...so that, by the push of a button, you could have access to quality assured information."



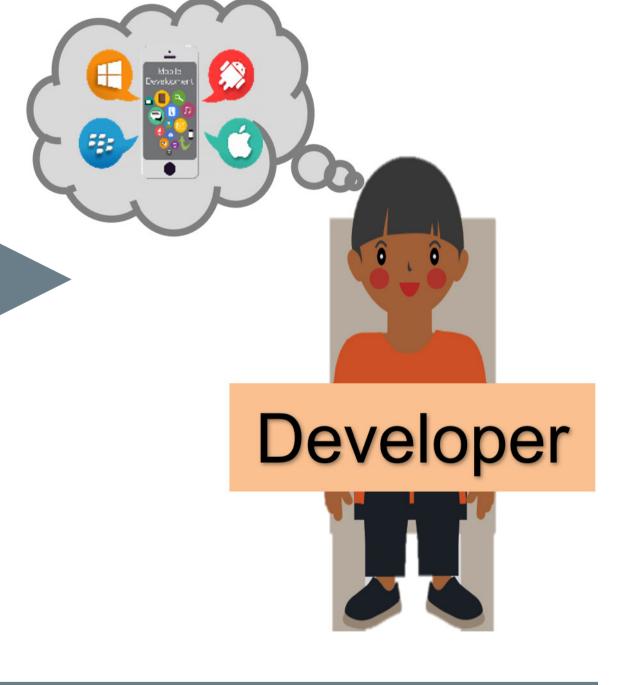
"I remember that we installed ten different apps consecutively to get experience. Then the choice was down to one that had a database where we could share information between two parents....[our choice of apps] is clearly governed by our use - what is it we want to accomplish with its use."



"We have mainly chosen apps when we could influence the development or develop ourselves ... we have probably not gone for apps that are verified then, but they're verified through widespread use by users".

"... That's really why we make apps

"... I hat's really why we make apps
...[we] try to imagine how it fits into
someone's routines so that you don't
have to change your entire life to get it
to work."



Patients "

"I do not allow apps that would have full access to images or the microphone and contact list and stuff. It's unacceptable to me. I am thinking about the safety of my data..."

"If there's an [online] group that gets me, then I sign in and see - if there's a lot of echo and nonsense...and I'm not getting anything back, [if] it's getting a bit like complaining, then I cancel immediately."

Figure 1. Examples of responses from interview participants.