

Seniors Managing Diabetes - User Research & Results

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Executive Summary

This report presents the results of the personal user research for the “Seniors Managing Diabetes” project. The first and hardest step of this research was to find senior with diabetes available to participate as a volunteer for the project. The research started asking to friends if they know someone who could help us. After a while looking, a couple of senior were found who could help; however, they were in Brazil and they could not communicate in english, which makes impossible to interview them. Because of that, the only possible option was to use the questionnaire to get some valuable data from them. In order to make the questionnaire understandable for them, a translation process was done, and a Portuguese version of the questionnaire was created. A contact in Brazil was responsible to personally give them the questionnaire.

Methodology

After a long time looking for volunteers, two Brazilian seniors with diabetes were found. Because of the geographic distance and the language difference, only the questionnaire was used to get data from these Brazilian volunteers. Before giving them the questionnaire, a translation to Portuguese was done, and the Portuguese version was sent to a contact in Brazil who personally gave it to the volunteers. Table 1 shows the number of seniors in each category according to their responses to the questionnaire.

What participants did

The volunteers were asked to answer a questionnaire with some of their personal information, and some of their contact with technology, explaining how they use technology to help them in the diabetes management.

What data was collected

Both volunteers said that technology can be useful enough to help them in the diabetes self management. According to them, the difficulties are how hard is to use any device, to really find what they are looking for and the graphic style (because of vision issues, size and colour of texts and pictures make them hard to see).

The volunteers make use of some technological device daily, but only to mesure their blood sugar level. They are not used to use any other app to help them to manage their health. One of them would accept learning to use a new device only to help in the diabetes self management. An application to help in the management of the diabetes with the diet regulation and reminders of the exactly time of medication would be apreciated.

Who was tested

Table 1: Number of volunteers in each category

Gender: <ul style="list-style-type: none">• Male: 1• Female: 1	Age range: <ul style="list-style-type: none">• 55-: 0• 56-80: 0• 71-85: 1• 86+: 1
Feel comfortable using: <ul style="list-style-type: none">• Computer desktop or laptop: 1• Tablet: 0• Smartphone: 0	Types of technologies used: <ul style="list-style-type: none">• Reminders apps: 0• Medication dosage control: 0• Diet regulation: 0• Control of physical exercise: 0• Search for general information about diabetes: 0• Blood sugar control: 2

Users needs list

- Application which permits the blood sugar levels self control → Possible to apply if we use our system dependable of the blood sugar reader.
- Application with reminders of the exactly time of medication → Possible to apply.
- Application with recommendation of food, to help them in the diet management → Possible to apply.
- Automation of the process of taking and analyzing blood sugar levels → Considering that we are working in an application for smartphones, tablets or even desktops, the process of taking the blood sugar level will still be done by other kind of technological device.

Stakeholder description

Seniors with diabetes: Our target user. Who is in need of some useful application to help in the diabetes self management.

Nutrition professionals: Who will give diet information to help the developers to improve the application.

Health professionals: Who will give precise information about diabetes and blood sugar levels.

Detailed primary persona

A key user for our system would be someone who need help to manage their diet and medication time control related to their diabetes. The user would continue using a blood sugar reader to manage the glucose levels, but he also would use our system to help him in food options, in order to avoid any kind of problems, and he would have available a reminders system which would not let him forget to take the correct medication in the correct time.

Scenario

Currently, our target users are in need of some help related to the diabetes self management topic. There are some applications related to diabetes, but usually they are not complete enough (without diet regulation, for example), and they are not focused in seniors, which creates some troubles when a senior tries to use this kind of application. Usually, the blood sugar reader is the only technological device used by these seniors, which they need to use before each meal to make sure they are in the right level range.

Task analysis

Before every meal, the senior needs to use a blood sugar reader to see his glucose level. Then, he needs to pay attention about the kind of food that is in the meal. He needs to have knowledge about the meal by himself or trust in a family member that the meal does not have anything that can harm him due to his diabetes.

Conclusion

After this research, we can conclude that senior with diabetes need more applications to help them in their health issue. Our system would help them to remember about the medications and give food options which would be recommended by health professionals. Moreover, our system would care about the design of the application, since we are working with seniors who probably are not used to technology, so the application needs to be easy to use and easy to understand.