**User Research Results**

**Summary:**

The research that was conducted individually in our group was mainly focused on seniors with diabetes, and their interaction with technology. Through this research, we were able to find a few similarities among the seniors that suffer from this condition. For example, many of the seniors did not find it hard to manage their condition. Although they did not have trouble managing it, it took them years to get accustomed to their schedule and remembering every procedure. For those that were cared for by medical professionals, they were guided in a professional manner and were able to adapt to the condition faster than some of the other seniors who did not receive this professional attention. Not only were they able to get familiar with their condition, but those who had visited a medical professional often also had more modern technology and received instruction in how to use them. Moreover, many of the seniors also found that technology itself is not useless, but rather the application interface may not be suitable. They believed that the technology was the right way to go but the applications designed for it were poorly made. This includes the fonts, pictures, size of texts, and visual issues. Lastly, it was found that some of the seniors did not approach the technology because they were unsure of how efficient and how accurate it is. They would have no problem in learning it, but sometimes the technology is complicated and no one is there to help them, so they would rather stick with old technology.

User needs list:

Upon first being diagnosed with diabetes, one needs to take precautions with treating it.  
Newcomers to diabetes should do the following:

* Stabilize their condition
* Know the repercussions of not treating it properly
* Learn how to manage it
* Learn the devices to keep track of information
* Learn what to do with that information
* Learn about how to go through a normal day and deal with the condition

For someone who is a regular or is already diagnosed:

* Create good habits in their life
* Check their vitals and conditions regularly
* Check blood glucose levels
* Regular check-ups from a medical professional to know of their condition

Some of the applications or technologies that diabetics can use are:

* Applications that monitor blood sugar levels
* Applications with reminders of exact time of medications
* Applications that can recommend food
* Applications that automatically log the food eaten

Stakeholders’ descriptions:

There are many people affected in our system when we are gathering information on diabetics, as well as people being affected by people who have diabetes.

**Seniors with diabetes**: The targeted user, they are in need of some useful application to help in the diabetes self-management.

**Family**: if meals are shared with family, then their support is required to maintain a fat- and carbohydrate-controlled diet. If the spouse does the shopping and cooking, then they play a key role in implementing the diet plan. Tech support for computing devices may also come from family members.

**Researchers:** they take an important role in finding out what can make the subjects lives easier. They try to look for data that will make the technology more appealing to seniors.

**Friend:** they were reported to offer tech support for computing devices. They were also relied on for understanding when their diet choices might conflict.

**Health care providers (doctors, nurses, pharmacists, nutritionists)**: key in providing ongoing services for monitoring long-term blood-glucose levels and creating the daily regimen of diet, exercise, and insulin booster dose.

The **manufacturers** of contemporary blood-glucose monitors have enabled direct, reliable, and affordable monitoring of blood-glucose levels. This tool gives users the feedback that they need to check their state as often as they require to effectively manage the three factors influencing equilibrium.

Primary Personas:

Betsy is a Caucasian 64 year old who has been diagnosed with diabetes since the age of 12. She lives in Toronto and has a job as a receptionist in a law firm. She lives alone in an apartment but has a busy lifestyle. She has had plenty of time to learn how to deal with her diabetes and has got it down pat. However, old age and her busy lifestyle is start to best her. Recently, she sometimes forgets to record her blood sugar level and taking her insulin. Betsy likes to exercise but has recently neglected it due to her work and age. Betsy decides she needs some help as time is getting the best of her. Since she lives alone she needs something she can do by herself. Betsy tries some of the health apps that are out there with her phone but none of them seem to help. She feels like they are too hard to navigate and do too many unneeded things. Betsy needs something that not only tracks her eating habits, but can track her blood sugar level, remind her to take insulin, and incentivise her to exercise. “I want something that does what I need and does not have the needless clutter of extra things”.

Jill has recently been diagnosed with type 2 diabetes. She is quite concerned. Her web surfing has revealed all sorts of horror stories about diabetes gone wrong. The doctor has told her that she needs to make many lifestyles changes, but they are much more easily said than done. Jill wants to quickly get her situation under control. She would like life to go on as normally as possible, and to continue to enjoy the things that really matter to her. Jill does not regularly exercise, and while she is somewhat aware of the diet choices she should be making, she has rarely attempted to maintain a strict discipline over what she eats. Jill has sufficient comfort with and knowledge of computers to use email and browse the web, but this is the full extent of her interest in learning about computers. She relies on family, friends, or the local Geek Squad to resolve technical issues.

Sally is an 87 years old and use to work for an accounting firm that has a lot of influence in the business world, which brings a lot of stress into her life. She has worked in the job for 30 years and knows it well, practically inside out. Many of the younger accountants use to ask her for advice due to her professionalism in the career. Despite being very good at her job, she has a condition which limited her working capabilities. She suffers from type 2 diabetes and has to constantly monitor her condition or else she cannot perform well. Because she had to monitor it a lot, she had to take the technology what was available in the 80’s to help her, however now that there is not as much stress in her life, she hasn’t bothered to learn the new available devices.

Lately she has been feeling down as her family is moving away from her hometown which leaves her alone in the city. This leads her to taking care of herself and monitoring her condition without the aid of anyone else. She notices that the technology she is using has been malfunctioning lately and cannot get the parts to replace it as they have been discontinued.

She has used many instruments to look at her condition but over time she eventually stopped caring as less stress has been put upon her. However with the increasing number of times of her equipment being malfunctioned, she turns to newer technology but cannot comprehend how to use it or how affective it will be. She wonders how she will get use to the newer technology without being a burden to her family and make it easier for her to live by herself whilst monitor it all.

Scenarios:

Jung-Ja is an old retiree who lives on the outskirts of town alone. She use to have family members living with her to remind her about her diabetes condition, but as of late they have all moved to the urban part of town. Not being use to this, she forgets one day to measure her blood glucose levels with her CGM and forgets to inject insulin into herself through an insulin pump. While her daily exercise routine, she realizes she is more tired than usual and has a blurry vision, but she could not remember why because nothing or no one reminded her to monitor her condition.

Betsy is a diabetic and works as a receptionist at a law firm. Her doctor gave her a booklet in order to keep track of the food she eats and her blood sugar level. One day while at work she realises she forgot the booklet from her doctor. She becomes stressed as she needs it in order to figure out what to eat