

# Usability Testing Plans

## Research Protocol:

1. **Project Title:** Seniors Managing Diabetes.
2. **Investigators:** Jeremy Johnston – jeremy.johnston@mail.utoronto.ca, Eric Siu – eric.xue@utoronto.ca, Marc-Alain de Niverville – marc.deniverville@mail.utoronto.ca, Jhony Campanha – j.campanha@mail.utoronto.ca, Joseph Lee - josephy.lee@mail.utoronto.ca.
3. **Purpose:** The purpose of our research is to understand the elderly with diabetes to help us test the usability of the design of interactive computational media that are intended to be useful to elders with diabetes. Our design is a health app used to monitor daily health and manage blood sugar level.
4. **Process to be followed:** We will brief the participants about the purpose of the study, explain the consent form to them, and ensure that they sign the consent form. We will then engage the participants in a roughly 30-minute long, semi-structured interview. A short questionnaire will be given to participants after that. We will also with their permission make observations.
5. **Participant selection:** Participants will be chosen from elders with diabetes. They will be identified via voluntary assessment and selected according to easy of access. In general, they will be characterized by being above the age of 55 and having diabetes.
6. **Relationships:** Our relationship to the participants may be described as follows: no relationship.
7. **Risk and benefit:** There will be minimal risk to the participants, for example that they feel that they have wasted their time. The only benefit will be to contribute to the education of the investigators. Participants are free to withdraw before or at any time during the study without the need to give any explanation.
8. **Consent details:** We will brief the participants about the purpose of the study, and explain the attached consent form to them, and ensure that they consent to participate and sign the consent form.
9. **Compensation:** Participants will receive no compensation.
10. **Information sought:** The information to be sought is described in the attached interview protocol, observation plans and questionnaires.
11. **Confidentiality:** Information will be kept confidential by the investigators. Names or other identifying or identified information will not be kept with the data. The only other use will be to

include excerpts or copies in the assignment submitted, but names and other identifying or identified information will not be submitted.

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## **Consent Form:**

### **Consent Form: Seniors Managing Diabetes**

I hereby consent to participate in a research study conducted by Jeremy Johnston, Marc de Niverville, Joseph Lee, Jhony Campanha, and Eric Siu for an assignment in University of Toronto Computer Science 318, Design of Interactive Computational Media.

I agree to participate in this study the purpose of which is to test the usability of the design, which is a diabetes management app.

I understand that

- The procedures to be used are interviews, questionnaires and observations.
- I will receive no compensation for my participation.
- I am free to withdraw before or any time during the study without the need to give any explanation.
- All materials and results will be kept confidential, and, in particular, that my name and any identifying or identified information will not be associated with the data.

#### **PARTICIPANT**

Name (please print)\_\_\_\_\_

Signature\_\_\_\_\_

Toronto, Date\_\_\_\_\_

INVESTIGATOR(s) Name\_\_\_\_\_ Signature\_\_\_\_\_

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# Research Instruments:

## 1. Interview Scripts:

1) Introduce yourself. Explain the goal of interview and present the consent form / research protocol to participants.

2) Begin asking participants about their opinions on the design:

Were you able to navigate through the app (e.g. switching between functions) without difficulties?

Can you always find what you are looking for in the app?

If the app is publicly released for free, are you going to use it frequently?

Do you think the system is attractive and fun to use?

Are fonts and graphs large enough for you?

Will this system help you managing diabetes (or health in general)? If yes, please explain in which ways it helped. (keeping diet logs? monitor blood sugar levels?)

What do you think about the appearance of the design?

Do you feel confident using the app?

For the health advices, do you think they are trustworthy?

Overall, how useful is this health tracking app?

3) Some open-ended questions:

What do you most like to change in the app?

Aspects to improve?

Even more functions in the app?

Things you like / dislike the most.

4) Conclude the interview and show appreciation.

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## **2. Questionnaire:**

*Please circle the option that describes you the most.*

1. Gender:

Male	Female
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2. Age:

55 -	56-70	71-85	86 +
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3. Overall, how useful do you think is this health tracking app?

Extremely useful	Useful enough	Not so useful	Extremely Useless
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4.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I think I would like to use this system frequently					
The system is NOT unnecessarily complex					
I don't need the support of technical person to use this system					
It's always easy to find the functions I want					
I'm able to finish majority of the tasks quickly / smoothly					
The visual aesthetics meets my standard					
The text and graphs are quite readable					
The system satisfies my need as a senior with diabetes					
The system is interactive and fun to					

use					
There's no inconsistency in the system					
I feel confident using the app					

5. Among the following *functions* of the design, which ones do you like? (Check all that apply)

- ☐ Recording diet and exercise
- ☐ Viewing personal history of diet and exercise
- ☐ Getting health advices from professionals
- ☐ Reminder for the insulin intake
- ☐ Recording the blood sugar level
- ☐ Seeing the daily / hourly trend of blood sugar level

6. Do you have any suggestions on improving this design?

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