



# Diabetes friends: their hopes and needs

Research Report

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# Executive Summary

Since we are working on our product, which is in its early stages, we were interested to explore more about the diabetics' life and their behaviors, and if there are any opportunities to develop a product for improving their livability and quality of life in order to control their blood glucose. Therefore, we have interviewed 3 diabetics patients on their needs, pain points, and their behaviors to deal with and maintain their blood glucose.



What  
they  
need?

# Key Findings

Diabetics patients have several hypos and hyper cases a week and most of them due to bad habits of assisting themselves and miss education of their needed doses. Even though there are some tracking and recording apps existed for blood glucose, but, the apps that can help them calculate their needed doses are not available in the market. This product will focus on building an app helping them calculating their needed doses of insulin.



# What did they need to maintain their blood glucose ?

Our team wanted to explore the diabetics' patients experiences and habits in controlling their blood glucose with digital tools. The goal was to determine what opportunities may exist for creating a new diabetic app to assist them in calculating their different types of insulin doses based on their body needs.

## Research Questions

- [Needs] What is the essential thing to know about how to control your blood glucose range?
- [Behaviors] How do you control your insulin glucose range?



## The 4 Types of Insulin Doses

### Basal Dose

The dose that covers their body for 24 hours.

### Blouse (Carb) Dose

The dose that they need when they want to eat\drink anything.

### Correction Dose

The dose they need when they have a hyper case.

1

2

3

4

### Correction and Carb Dose

The dose they need when they want to eat when they are in hypo case.

# 5 Participants

	Hypo Frequency	Hyper Freqecny	Any use of application for diabitic but not help in doses calculation	Knowing how to calculate the daily needs of insulin	Knowing how to calculate the basal dose	Knowing how to calculate the bulose doses	Knowing how to calculate the correction dose	Knowing how to calculate the correction+c arbs dose	Knowing how to calculate their body values	Knowing of the carbs count
Participant 1	3-5 times a week	2 times a week	Youtube and instagram accounts for carbs counting	No	No	No	No	Yes	No	Yes
Participant 2	3-4 times a week	1 time time a week	Libere link to track blood glucose	No	No	Yes	Yes, but not 90% successfull	Yes	No	Yes
Participant 3	4-5 times a month	Over 5 times a week	No app using	No	No	No	No	No	No	No
Participant 4	2 times a week	1 times	Libere link to track blood glucose	No, fully dependant on the pumb	No	No	Yes	No	No	Yes
Participant 5	3 times a week	Over 5 times a week	Youtube and instagram accounts for carbs counting	No, fully dependant on the pumb	No	No	No	No	No	No

# **Key finding #1: Inability to calculate doses and their needs of insulin**



# Finding

All participants showed that they were unable to determine the different doses they need, how much insulin their bodies need on a daily basis and how it is balanced with the amount of carbohydrates.

"This is very long process, tired and difficult step, I am bad in that"

- Participant 3

# Recommendation 1

01

**Adding daily need of insulin calculator**

02

**Adding calculator for each type of doses (Basal Dose, Carb Dose, Correction Dose, and Carb + Correction Dose)**

03

**A logbook for blood glucose with special sign if the record in hypo or hyper case with the tips to assist them self**

04

**A tracker of taken insulin and the rest value of insulin for them they can take**

**Key Finding #2:**  
**Diabetes Education Gap: inability to calculate their body values (carb ratio, insulin sensitivity)**  
**And assisting themselves in their hypo and hyper**



# Finding

4 out of 5 participants answers showed that they missed diabetes educated, they don't follow a good behaviors in hypo and hyper times to assist them self, and don't know how to calculate their body values or why those are their values.

"I have miss diabetic education in hospitals and I am sad of that, I need one teach me my body needs and why and how my body values is coming"

- Participant 4

"After a while of hypo about 4-5 hours I am being in hyper, and I feel tired because of hyper and hypo hyper and hypo"

- Participant 3

# Recommendation 2

01

**Our app will have a carb ratio calculator, body sensitivity calculator based on their weight, with the teaching of each value need**

02

**Our app will focus of giving tips in case of hypo and hyper when they add a record to logbook and even in a special section**

# Next steps..

1

**Validate findings with surveys**

2

**Conduct foundational studies on how to calculate the doses and carb ratio, insulin sensitivity, and how to do the first aids in case of low blood glucose(hypo) and high blood glucose (hyper).**

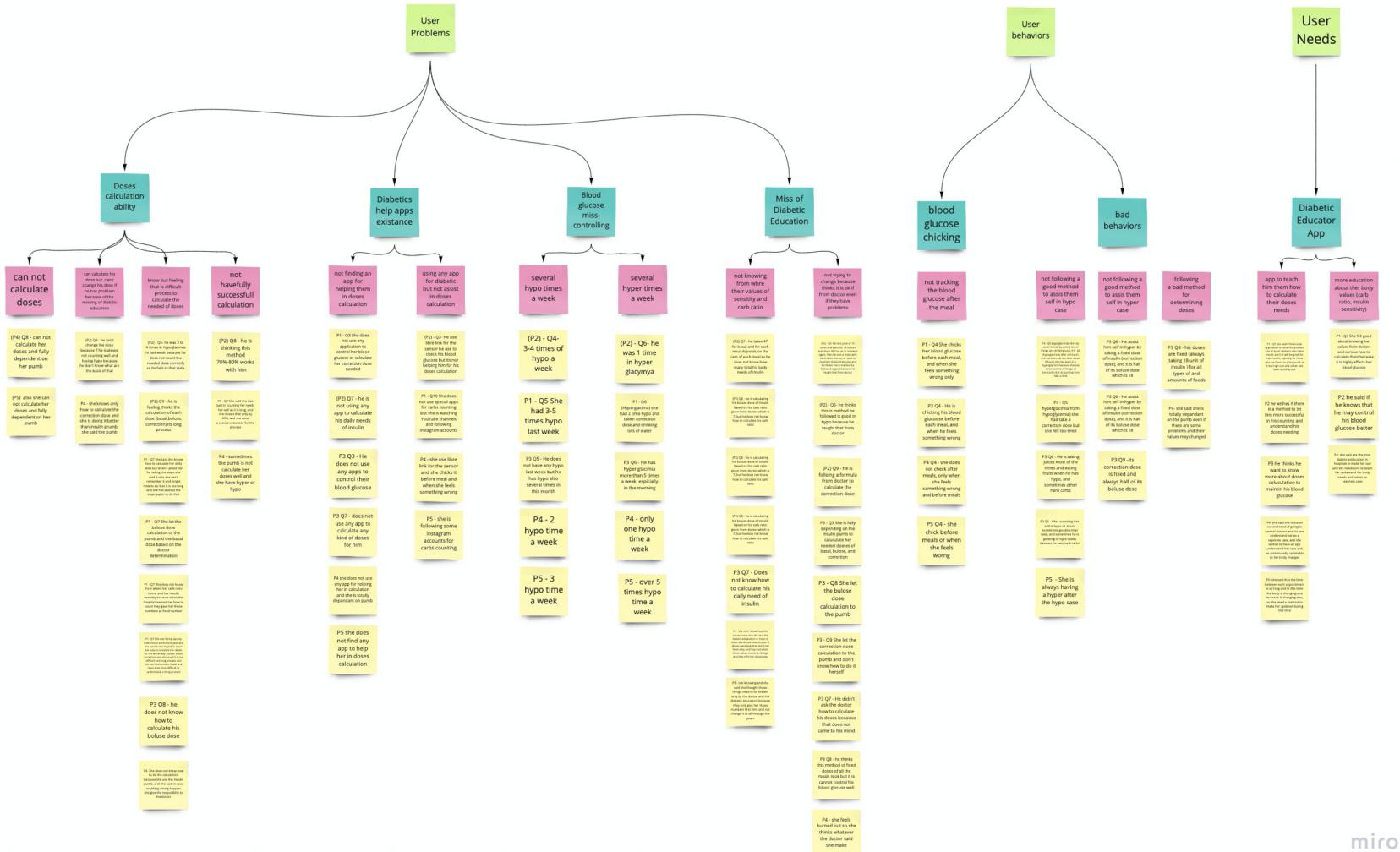
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**Run a design sprint for brainstorming**



# APPENDIX

# Data Collection and Analysis



# User Persona

## Fatima Ameen: Diabetic Type-1 Patient



" Even though I use the insulin pump, but because my weight always changes, that leads to my body values to change and I don't know how to calculate them, and that makes the pump not calculating my doses well I, and I don't know how to calculate them, and because the appointments are too apart the doctors tried to teach me how to calculate them but its too difficult for me as it is a long operations "

### • Who is Fatima?

- Diabetic Type-1 Patient
- Inulin Pump user

### • Goals:

- Achieve a good HBA1C level
- get a normal life with her illness

### • Motivations:

- I know how to calculate the carbs in my meal well

### • Frustrations

- She has several hypo and hyper cases
- Her hospital appointments are very far apart
- The pump can't adapt to her weight change so there are mistakes in her doses calculation and she doesn't know what is her body values and its needs for insulin