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| Motivate Me App | Version: <3.0> |
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Motivate Me App Vision

Version <3.0>

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Revision History

| Date | Version | Description | Author |
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| <09/23/24> | <1.0> | <Initial draft> | <Mary Beth Walsh> |
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Vision

1. Introduction

The purpose of this document is to collect, analyze, and define the business requirements, i.e., high-level needs, desired ultimate business outcomes and features of the Motivate Me App. It focuses on the capabilities needed by the stakeholders and the target Patients, and why these needs exist in the first place. The details of how the Motivate Me App fulfills these needs are detailed in the use case and software requirements specification.

1.1 Background

Dr. Christina Robinson is a pediatrician to underserved patient populations and their communities. Dr. Robinson is working with a team of med students: Rumaila Hussain, Kavita Patel, Joice Song, and Fatema Jafferji. The team has a research interest in health text message intervention to provide individual and family-based care to address racial and socioeconomic disparities of obesity. With this interest in mind, the team wants to create an app that is accessible as a resource to all families.

- Underserved communities often struggle with obesity due to systemic barriers like limited access to healthcare, healthy food, and safe spaces for exercise. These challenges are compounded by a lack of personalized, accessible tools to support preventative care and track health progress. Existing health resources frequently overlook cultural and socioeconomic needs, making it harder for families to stay engaged in long-term health management.
- The background problem revolves around health disparities and the growing obesity crisis in underserved populations. Families in these communities face barriers such as limited access to healthcare, low adherence to health interventions, and lack of personalized resources. Obesity is exacerbated by socioeconomic challenges, insufficient preventative care, and lack of family-focused support. By creating an app tailored for tracking biometrics, managing medications, and fostering social support, Dr. Robinson's team aims to empower families with accessible, family-centered solutions to address health disparities and improve outcomes.

The basic goal of this project is to send motivational text messages to remind Patients to make progress towards their goals. The client, Dr. Robinson and her team, would also like to create a space for Patients to learn about their health and create SMART goals.

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2. Business Requirements

2.1 Business Opportunity/Problem Statement

Currently, the team has no mobile app or website to help them with their goal of creating a personalized e-health text message program to remind Patients to make small, daily healthy decisions. Without this, the team does not have an easy way to remind Patients to make these small changes, and the Patients don't have an easy and reliable place to log their goals, customize them, and get reminders.

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| The problem of | The lack of an organized and accessible system for supporting and tracking healthy lifestyle changes. |
| affects | The Patients |
| the impact of which is | Not being able to remind Patients about what they need to do easily |
| a successful solution would be | Creating an app so Patients can login, log biometrics. make goals, have a calendar with a goal tracker, get notifications, and be able to journal. |

Detailed problems of Patients/patients:

1. Centralized Tracking: Patients can't easily log goals or track progress in one place.
2. Visual Goal Tracking: Patients can't see progress on a calendar or tracker, reducing motivation.
3. Biometric Logging: Patients can't easily track vital health data like weight or heart rate.
4. Reminders: Patients miss daily health prompts due to no automated notifications
5. Journaling: Patients lack a simple way to document their health experiences.

2.2 Business Objectives and Success Metrics

BO-1: The contribution of this study will be to rigorously evaluate an innovative e-health text message intervention to provide individuals and family based care to address racial and socioeconomic disparities of obesity.

SM-1: There is no statistically significant difference between groups so more participants are needed to discern a notable difference.

BO-2: SMART goals are sent periodically to participants to assess confidence and motivation at 1 week, 2 weeks, and 6 weeks after setting a specific goal. Specifically, customizable notifications can be set 1-3 times a week or as preferred to inspire and uplift participants.

SM-2: Past: none per week, Goal: 1 per week, or as needed.

BO-3: Prompt participants to input and update their biometrics such as weight, waist circumference, and lifestyle behaviors at monthly intervals.

SM-3: Past: only at Doctor visits, Goal: every month.

BO-4: Improve the participant's healthy decision-making to have a compounding effect in treating current chronic illnesses, preventing future health problems, and reducing the cost of healthcare overall.

SM-4: Maintain the 6 pillars of lifestyle medicine, calorie/diet, physical activity, sleep, substance use, stress, social connection, and other, to frequently check progress daily.

BO-5: To provide measurable improvements in Patient health behaviors and engagement by tracking key metrics before and after app adoption. The app will empower Patients to set and achieve health goals, providing administrators with actionable insights on its impact.

SM-5: Increase the percentage of Patients achieving their health goals by 70% within six months of using the Motivate Me app, as measured by consistent goal tracking and biometric updates.

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2.3 Vision Statement

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|--------------------|---|
| For | Families and children |
| Who | Have lower accessibility to health information |
| The MotivateMe App | Is a mobile friendly application |
| That | Enables Patients to set SMART goals and receive motivational reminders in the form of text messages |
| Unlike | Other motivational apps |
| Our product | MotivateMe is completely customizable to address the Patient's specific needs and goals. The support of Dr. Robinson's team also provides health information relevant to Patients that other apps don't provide |

2.4 Business Risks

RI-1: Low Patient adoption/retention: Patients may not find the app engaging or useful enough, leading to low adoption rates and high churn. (Probability = 0.4, impact = 7)

RI-2: Non-Compliance with Health Data regulations: Failure to comply with regulations such as HIPAA can result in legal penalties and loss of trust. (Probability 0.3, impact = 9)

RI-3: Data breaches and secure vulnerabilities: Unauthorized access to sensitive Patient data can lead to breaches, damaging the app's reputation and resulting in legal consequences. (Probability = 0.5, impact = 9)

RI-4: Inability to scale with growing Patient base: The app may face performance issues or downtime with the increasing number of Patients, leading to a poor Patient experience. (Probability = 0.3, impact = 0.7)

RI-5: Hesitation to share sensitive health data: Patients may be reluctant to share personal health information, limiting the app's effectiveness. (Probability = 0.2, impact = 0.5)

2.5 Business Assumptions and Dependencies

The following assumptions about participants may or may not cause changes to the Vision document.

AS-1: The participants will use the app daily and fill out each section truthfully.

AS-2: An individual from the group will continue with the maintenance and upkeep of the implemented application and website after the development team graduates.

3. Stakeholder Profiles and Patient Descriptions

3.1 Market Demographics

Potential customers include patients and general Patients. Anybody who wants to be able to log their goals and get motivational reminders would be able to use the Motivate Me App.

3.2 Stakeholder Summary

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| Stakeholder | Description | Key Responsibilities w.r.t. the system to be | End Patient? |
|---|--|---|--------------|
| MotivateMe Admin (Representative: Dr. Christina Robinson) | Head of the team, mentor to the team of med students | Oversees all operations, finalizes published information to the app | Yes |
| Patient | The primary Patient of the app | create SMART goals and work on completing them | Yes |
| HSC IT Enterprise | The product system will be maintained by the HSC IT team in the future | Ensures that the system will meet the requirements. Ensures that the system will be maintainable. Provides development guidelines when external developers desire to have their applications. | No |

3.3 Patient Environment

The Motivate Me app will be available to all participants that are within the community set up by Dr. Robinson; in the future, the app will also be available to any individual interested in keeping track of their health. The app will be used not only while participants are included in the study but can be used after to uphold their routines.

4. Scope and Limitations

This section provides a high-level view of the Motivate Me App and system configuration.

4.1 Product Perspective

Here is a summary of the products:

- Login/Signup for Patients
- Patients features:
 - Tracking biometrics of a person: BMI, Height, Weight, Blood sugar (tracking from measuring from a health center)
 - Tracking, sleeping time, exercising,
 - Reminding Patients to taking pills and medicine
 - Tracking upcoming meetings with doctors (Calendar/ progress bar)
 - Social connection

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Push notification (~ progress reminder).

FE-1: Patient Registration & Login

Patients will be able to initially register for the app and then log in later to be able to access everything in the app. The app will also be able to be used in English or Spanish.

FE-2: Biometrics

The Patient will be able to log their biometrics (i.e height, weight, BMI, BP, blood sugars, etc). The Patients will also be able to update this information as their biometrics change.

FE-3: Goal Making

The Patient will be able to set lifestyle goals. There are six distinct lifestyle goals, each a separate category, as listed;

1. Calorie content / Quality Diet
2. Physical activity
3. Sleep
4. Substance Use
5. Stress
6. Social connection
7. Other

These goals are also customizable. The Patient will be able to set the duration of the goal, frequency check in /

progress measurement, and frequency and mode of motivational health educational messages.

FE-4: Calendar & Goal Tracking

The Patient will be able to look at the calendar that blocks out the week depending on if the goal was met or not, for visual satisfaction.

For daily: Green = 5+ days, Yellow = 3-4 days, Black = < 3 Days

For weekly: Green = (70%+), Yellow = (40-69%), Black = (0 - 39%) on a sliding scale

FE-5: Notifications

The Patients will receive pop up notifications, the Patient will be able to acknowledge the motivation message via a swipe down. Data analytics can also show the Patient how many times they acknowledged the message and the app can detect the degree of interaction.

FE-5: Journal

The Patient will be able to have a safe space to explore and express their emotions. The app will sometimes also give Patients a prompt to help them get a start on what to write.

4.2 Deployment Considerations

This app is going to be deployed in both the Apple Store (for iOS) and Google Play (for Android). Both require authorized, ownership accounts that are made under our client, Dr. Robinson, with her credentials in which only she has access to.

5. Other Product Requirements

5.1 Applicable Standards

The desktop Patient-interface can be any Windows or MAC computer. The mobile Patient-interface can be any iPhone or Android phone.

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5.2 System Requirements

The system shall interface with our developed database to store Patient information for all our Patients.

The server component of the system shall operate on the Amazon Web Services Server.

The client component of the system shall operate on any personal computer or mobile device with a 486 Microprocessor or better.

5.3 Performance Requirements

The system shall support up to 100 simultaneous Patients against the database we create, and up to 50 simultaneous Patients against the local server.

The system shall provide access to our Patient database after login with no more than a 15 second delay.

The system shall complete 80% of all transactions within 3 seconds.

5.4 Environmental Requirements

Our software will be compatible with any mobile device that can access a basic internet browser and download the application.