

# **Software Requirements Specification**

for

## **ATG Healthcare Mobile Application**

Version 1.0

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# Revision History

Name	Date	Reason For Changes	Version

Table 1: SRS Revision History

# Abbreviations

Term	Description
AWS	Amazon Web Services
MVP	Minimum Viable Product
UX	User Experience
JSON	JavaScript Object Notation
JWT	Json Web Token
MFA	Multi-Factor Authentication
OTP	One Time Password
PHI	Protected Health Information
RBAC	Role Based Access Control
HIPAA	Health Insurance Portability and Accountability Act
BAA	Business Associate Agreements
CN	Care Navigator

Table 2: Abbreviations

# Functional Requirements Summary

1. User Registration & Login
2. Dashboard Navigation
3. Care Plan Management
4. Secure Messaging
5. Document Upload
6. Readiness Questionnaire
7. Medication Management
8. Appointment Scheduling
9. Care Intake Form
10. Notifications
11. System Admin Panel
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# 1. Introduction

## 1.1 Objective

The purpose of this document is to specify the functional and non-functional requirements for the ATG Healthcare Care Plan Manager application. This mobile application enables Clients to have the required support and Care Navigators (CNs) to manage and track care plans. The scope of this SRS covers the development of key features, including care plan management, medication tracking, secure messaging, and appointment scheduling, as detailed in this document.

## 1.2 Scope Overview

The ATG Healthcare Care Plan Manager application aims to digitize and streamline healthcare management processes for CNs. It focuses on:

- Providing secure communication between users.
- Facilitating the creation, update, and tracking of care plans.
- Ensuring timely medication tracking and adherence through reminders and notifications.
- Allowing seamless document uploads for care-related files.
- Scheduling and managing appointments using third-party tools like Calendly.

The product adheres to HIPAA standards, ensuring secure storage and data transmission. It leverages modern frameworks like React Native for cross-platform compatibility and integrates with a backend CRM for data synchronization.

## 1.3 Document Conventions

IEEE 830-1998 standard for writing SRS documents was used in writing this SRS document.

## 1.4 References

Mobile App Requirements Document, provided by Ayman Tech Global Ltd.

- Title: ATG Healthcare Mobile App Requirements Document
- Author: Ayman Tech Global Ltd.

Final Project Proposal, submitted by the Vortexa team.

- Title: Final Project Proposal - ATG Healthcare Care Plan Manager
- Prepared by: Vortexa Group
- University: Faculty of Information Technology, University of Moratuwa.

HIPAA Compliance Guidelines.

IEEE 830-1998 standard for writing SRS documents.

## 1.5 Intended Audience

- Developers: To use the detailed functional and non-functional requirements as a blueprint for system design and development.
- Project Managers: To monitor progress and ensure alignment with specified requirements.
- Care Navigators (CNs) and Caregivers: Stakeholders who provide insights to validate the system's usability and effectiveness.
- Quality Assurance/Testers: To develop test cases and validate the system against the requirements outlined in this document.
- Supervisors and Clients: To review and approve the project scope and ensure deliverables meet business needs.

## 2. Considerations

### 2.1 Assumptions and Dependencies

1. Third-party Services:
  - o Integration with a HIPAA-compliant CRM for care plan synchronization.
  - o Appointment scheduling relies on a third-party tool such as Calendly.
2. Requires stable internet connectivity for data synchronization and notifications.

### 2.2 Limitations and Considerations

1. Strict adherence to HIPAA standards for secure data handling restricts flexibility in handling sensitive data.
2. Performance Expectations:
  - o The app loads within 2 seconds on supported devices.
3. The app is built using React Native, so platform-specific functionality may require custom development.

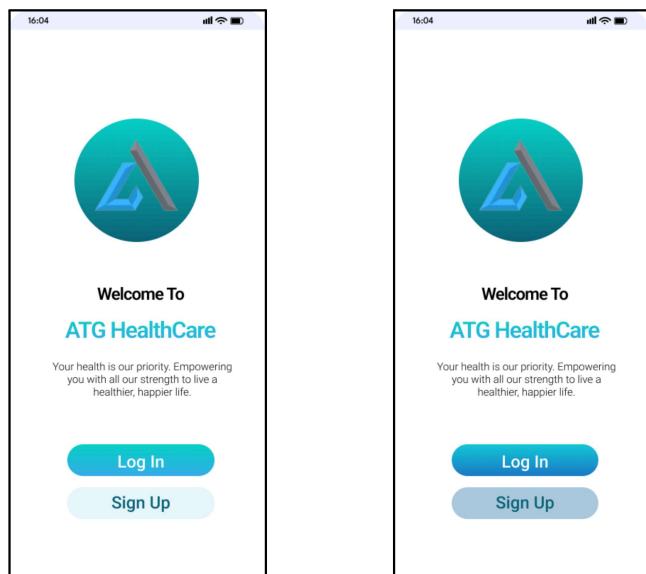
### 2.3 Exclusions

1. Advanced AI Diagnostics: Predictive analysis for healthcare conditions will be considered for future phases.
2. IoT and Wearable Integration: Support for real-time monitoring via IoT devices or wearables is out of scope.
3. Offline Mode: The application will not support offline functionalities due to reliance on CRM integration and cloud storage.
4. Production Deployment for Large Enterprises: While scalable, enterprise-wide deployment will be addressed post-MVP.

### 3. Functional Requirements

#### 3.0 Welcome

Figure 3.0.1 Welcome Figma



#### 3.1 User Login & Logout

##### 3.1.1 - Login functionality

###### 3.1.1.1 - Description

The system uses AWS Cognito to authenticate users by validating their credentials along with MFA. Upon successful login, Cognito provides a session token, granting access to the appropriate dashboard based on the user's role.

###### 3.1.1.2 - Inputs

- Email
- Password
- OTP

###### 3.1.1.3 - Outputs

- Successful login: Redirect to the user's dashboard.
- Failed login: Cognito returns an error message indicating invalid credentials.

#### 3.1.1.4 - Preconditions

- The user must be registered in the Cognito User Pool.
- The provided credentials must match the records in the User Pool.

#### 3.1.1.5 - Postconditions

- A session is initiated for the logged-in user.
- Access is granted to role-specific features and content.

#### 3.1.1.6 - Actors

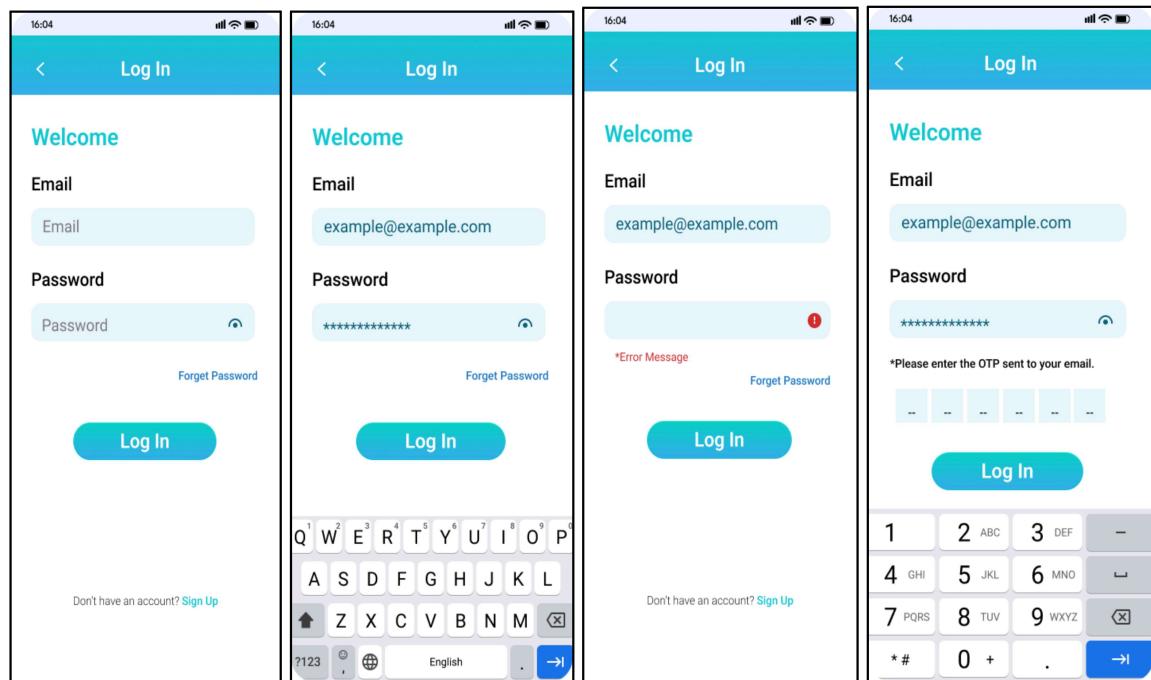
- Client
- Care Navigator
- Administrator

#### 3.1.1.7 - Constraints

- User authentication and password management are handled by AWS Cognito.
- Passwords are securely hashed by Cognito using industry-standard practices.

#### 3.1.1.8 - Figma

Figure 3.1.1 Login Figma



### 3.1.2 - Registration functionality

#### 3.1.2.1 - Description

The system uses AWS Cognito to register users by creating a record in the Cognito User Pool. Upon successful registration, a confirmation email is sent to the user for verification.

#### 3.1.2.2 - Inputs

- Username
- Email
- Password
- Confirm Password

#### 3.1.2.3 - Outputs

- Successful registration: A user record is created in the Cognito User Pool, and a verification email is sent.
- Failed registration: Error messages for invalid or duplicate information.

#### 3.1.2.4 - Preconditions

- The email address must not already exist in the Cognito User Pool.

#### 3.1.2.5 - Postconditions

- The user's account is created with an "unconfirmed" status until the email verification link is clicked.

#### 3.1.2.6 - Actors

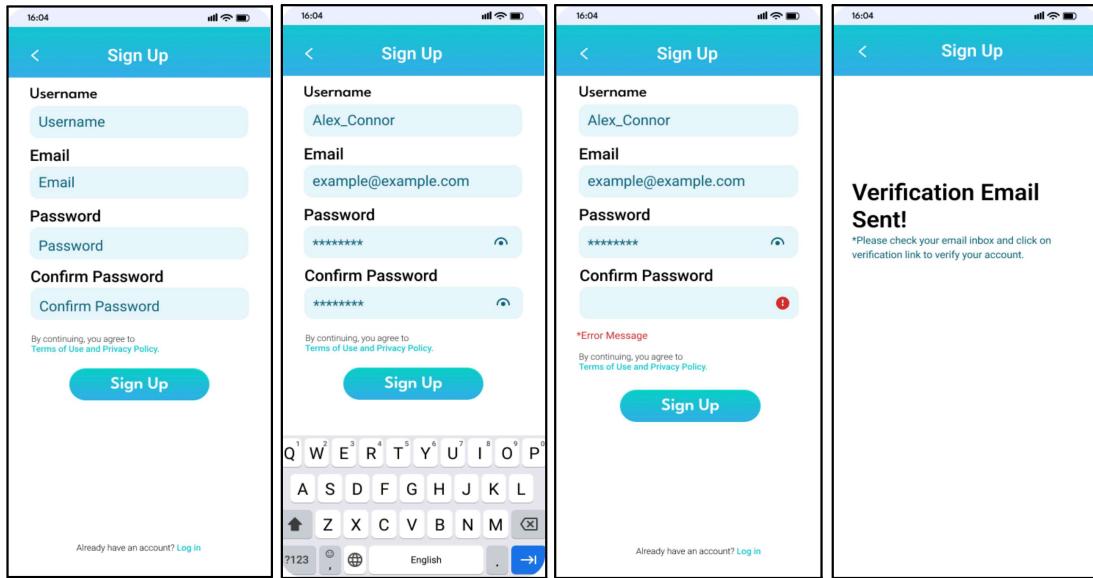
- Client
- Administrator

#### 3.1.2.7 - Constraints

- Passwords must meet Cognito's complexity requirements (e.g., minimum length, uppercase/lowercase letters, numbers).
- The verification link expires after a specific time.

### 3.1.2.8 - Figma

Figure 3.1.2 SignUp Figma



### 3.1.3 - Password recovery

#### 3.1.3.1 - Description

The system allows users to reset their password by using AWS Cognito's Forgot Password feature. A reset code is sent to the registered email, allowing the user to set a new password.

#### 3.1.3.2 - Inputs

- Registered Email Address
- New Password
- Confirm Password

#### 3.1.3.3 - Outputs

- Successful recovery: A reset code is sent to the user's email. Password reset.
- Failed recovery: Error message if the email is not found in the Cognito User Pool.

#### 3.1.3.4 - Preconditions

- The email address must be registered in the Cognito User Pool

#### 3.1.3.5 - Postconditions

- The user resets their password successfully, and the new password is stored securely in Cognito.

#### 3.1.3.6 - Actors

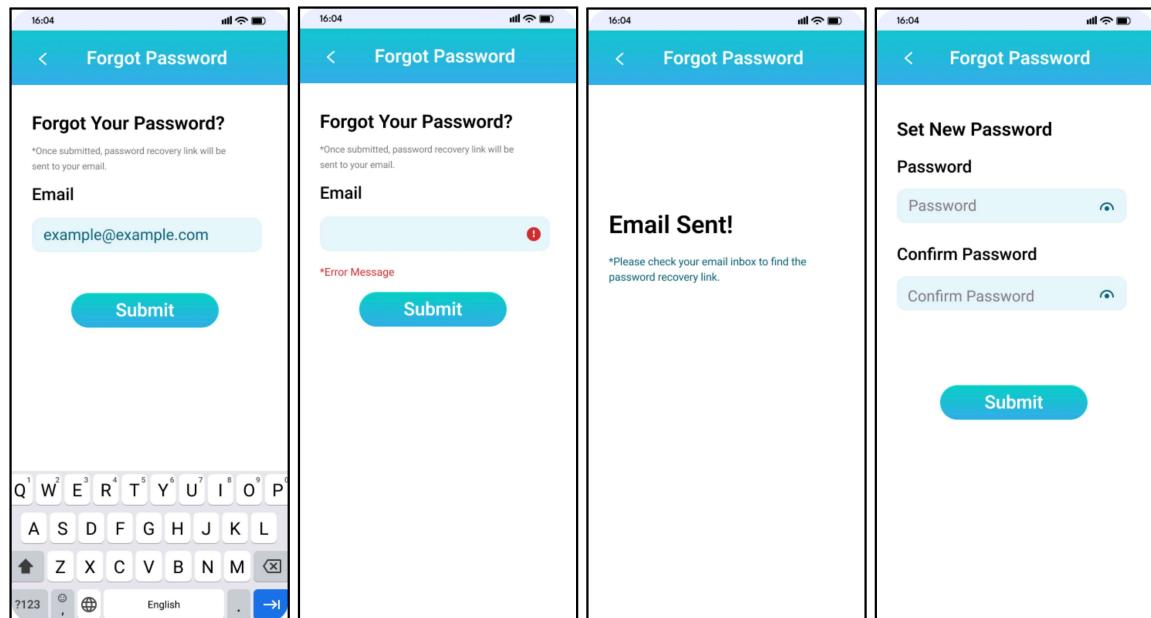
- Client
- Care Navigator

#### 3.1.3.7 - Constraints

- Reset codes are one-time use and expire after a configurable duration.
- Passwords must meet Cognito's complexity requirements.

#### 3.1.3.8 - Figma

Figure 3.1.3 Forgot Password Figma



### 3.1.4 - Secure logout

#### 3.1.4.1 - Description

The system ensures secure logout by invalidating the user's session in AWS Cognito.

Users can manually log out or are automatically logged out after a period of inactivity to prevent unauthorized access.

#### 3.1.4.2 - Inputs

- User-initiated logout request.
- Automatic logout trigger after 15 minutes of inactivity.

#### 3.1.4.3 - Outputs

- The user is redirected to the login page.

#### 3.1.4.4 - Preconditions

- The user must be logged in.
- Automatic logout requires a session to be active and inactive for the configured timeout period.

#### 3.1.4.5 - Postconditions

- The session is terminated, and the user can no longer access secure content without logging in again.

#### 3.1.4.6 - Actors

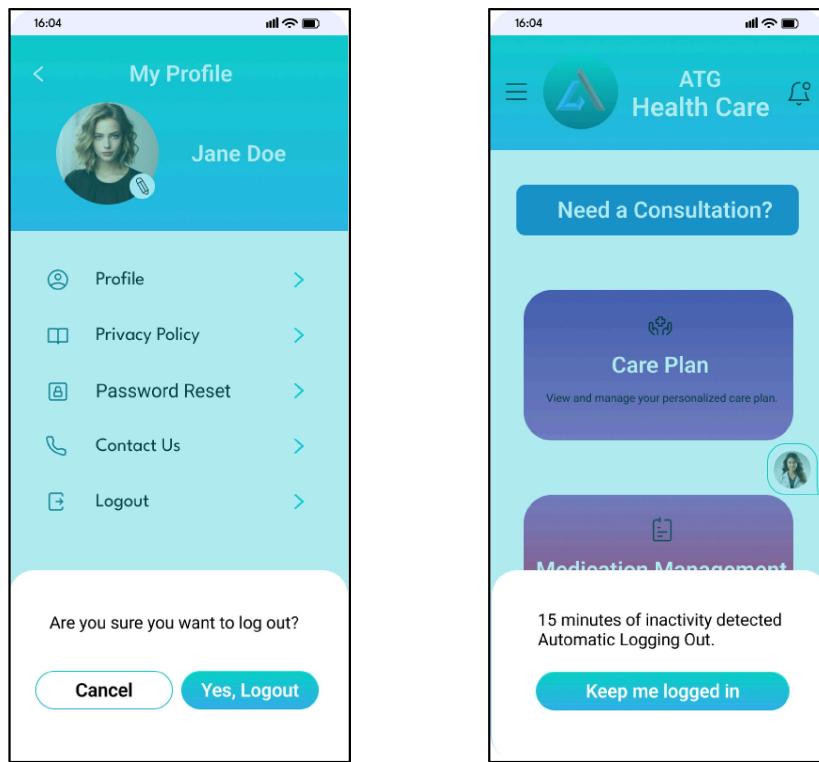
- Client
- Care Navigator
- Administrator

#### 3.1.4.7 - Constraints

- Tokens are invalidated and terminate active sessions.
- Automatic logout must notify the user before session termination (e.g., "Your session will expire in 1 minute due to inactivity").
- Users should be redirected to the login page after either manual or automatic logout.

### 3.1.4.8 - Figma

Figure 3.1.4 Logout Figma



## 3.2 Dashboard Navigation

### 3.2.1 - Display key information

#### 3.2.1.1 - Description

The system provides a centralized dashboard that displays critical information, such as care plans, notifications, and user tasks, tailored to the user's role.

#### 3.2.1.2 - Inputs

- Role information (e.g., admin, user).

#### 3.2.1.3 - Outputs

- Centralized view with key information for the user.

#### 3.2.1.4 - Preconditions

- The user must be authenticated and authorized to access the dashboard.

#### 3.2.1.5 - Postconditions

- The user can see relevant and updated information on the dashboard.

#### 3.2.1.6 - Actors

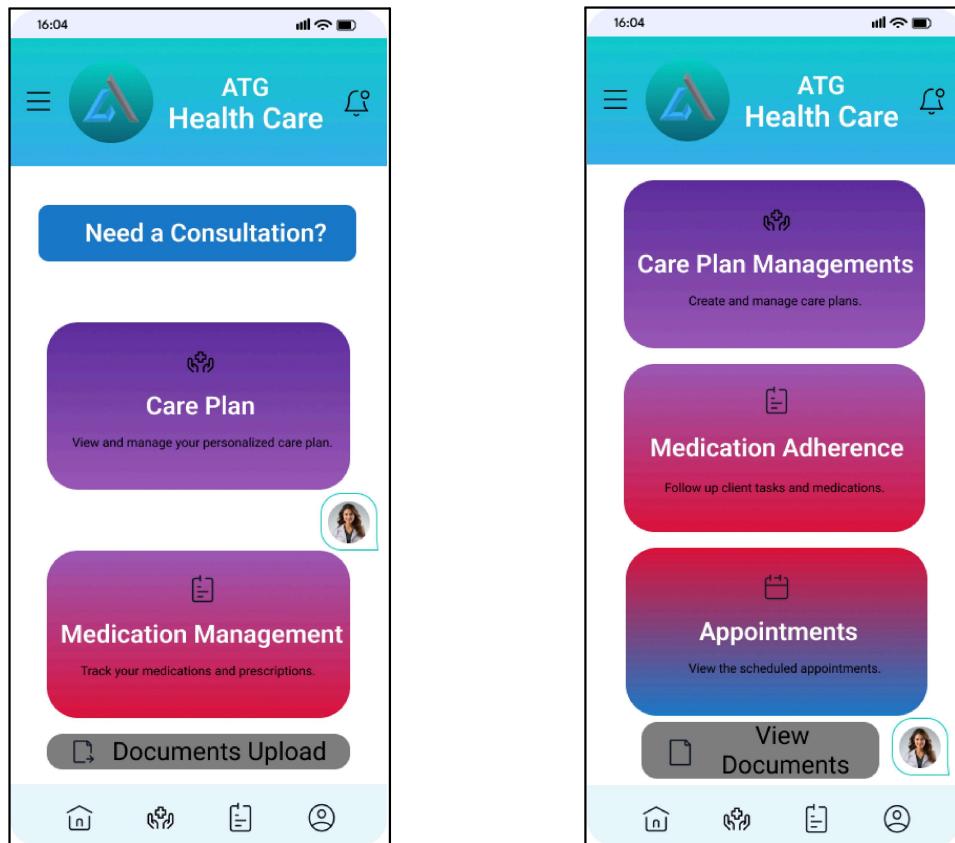
- Client
- Care Navigator
- Administrators

#### 3.2.1.7 - Constraints

- Content must be dynamically loaded based on the user's role.

#### 3.2.1.8 - Figma

Figure 3.2.1 Dashboard Figma



### **3.2.2 - Access different modules via a navigation menu**

#### **3.2.2.1 - Description**

The system provides an intuitive navigation menu that enables users to access various modules, such as care plans, tasks, and messaging.

#### **3.2.2.2 - Inputs**

- User interaction with the navigation menu (Click).

#### **3.2.2.3 - Outputs**

- Navigation to the selected module.

#### **3.2.2.4 - Preconditions**

- The user must be authenticated.

#### **3.2.2.5 - Postconditions**

- The user is redirected to the selected module.

#### **3.2.2.6 - Actors**

- Client
- Care Navigator
- Administrators

## 3.3 Care Plan Management

### 3.3.1- The system must allow users to view active care plans.

#### 3.3.1.1 - Description

The system enables users to view their current care plans, including task lists, due dates, and responsibilities.

#### 3.3.1.2 - Inputs

- User ID (to fetch care plans specific to the logged-in user).
- User role (to filter tasks or access limitations if needed).

#### 3.3.1.3 - Outputs

- Displayed care plan details:
  - ❖ Tasks or activities.
  - ❖ Due dates.
  - ❖ Responsible parties.

#### 3.3.1.4 - Preconditions

- The user must have at least one active care plan associated with their account.

#### 3.3.1.5 - Postconditions

- The care plan details are displayed on the dashboard.

#### 3.3.1.6 - Actors

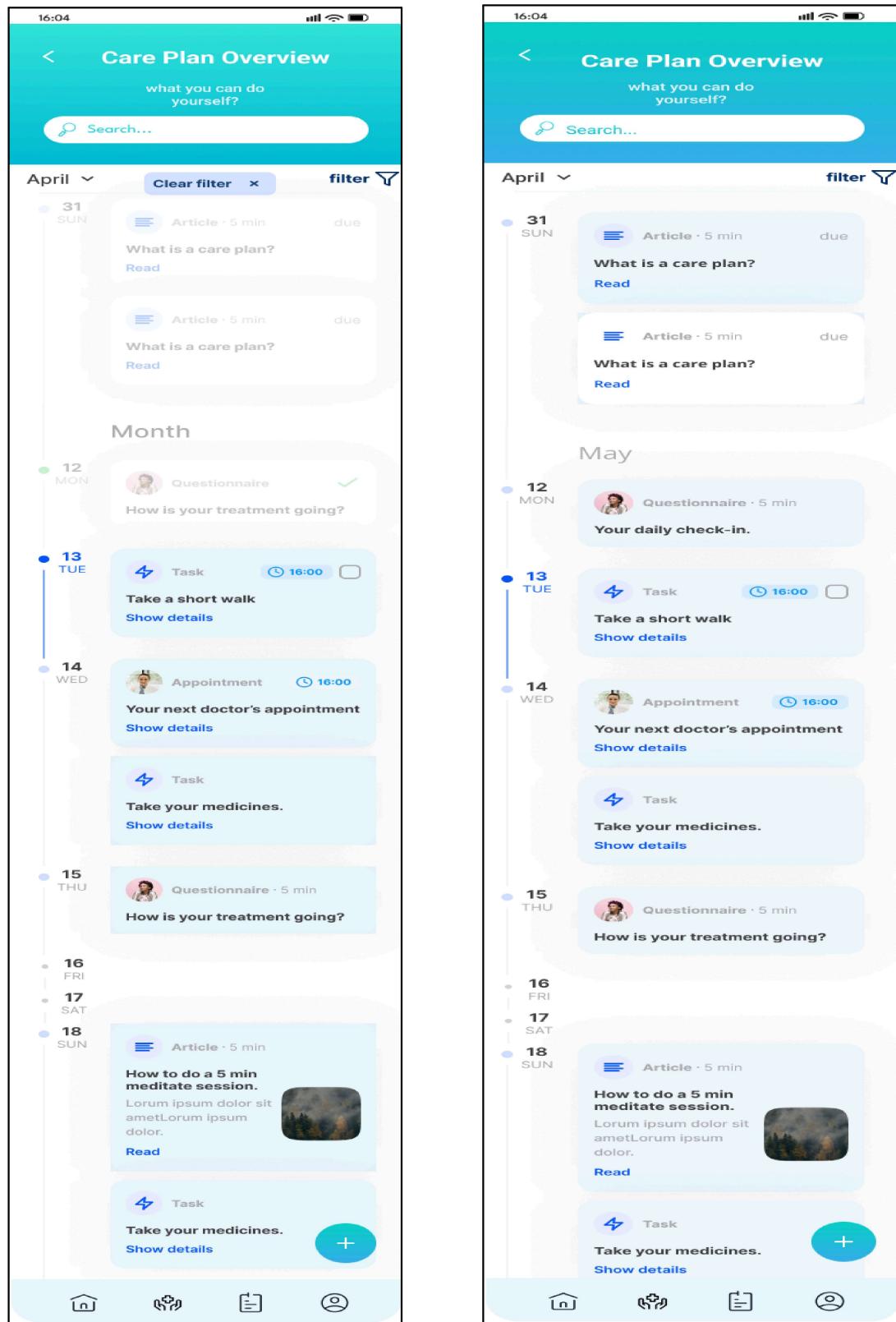
- Clients (Users): View their care plans.
- Care Navigators: View assigned care plans to monitor progress.

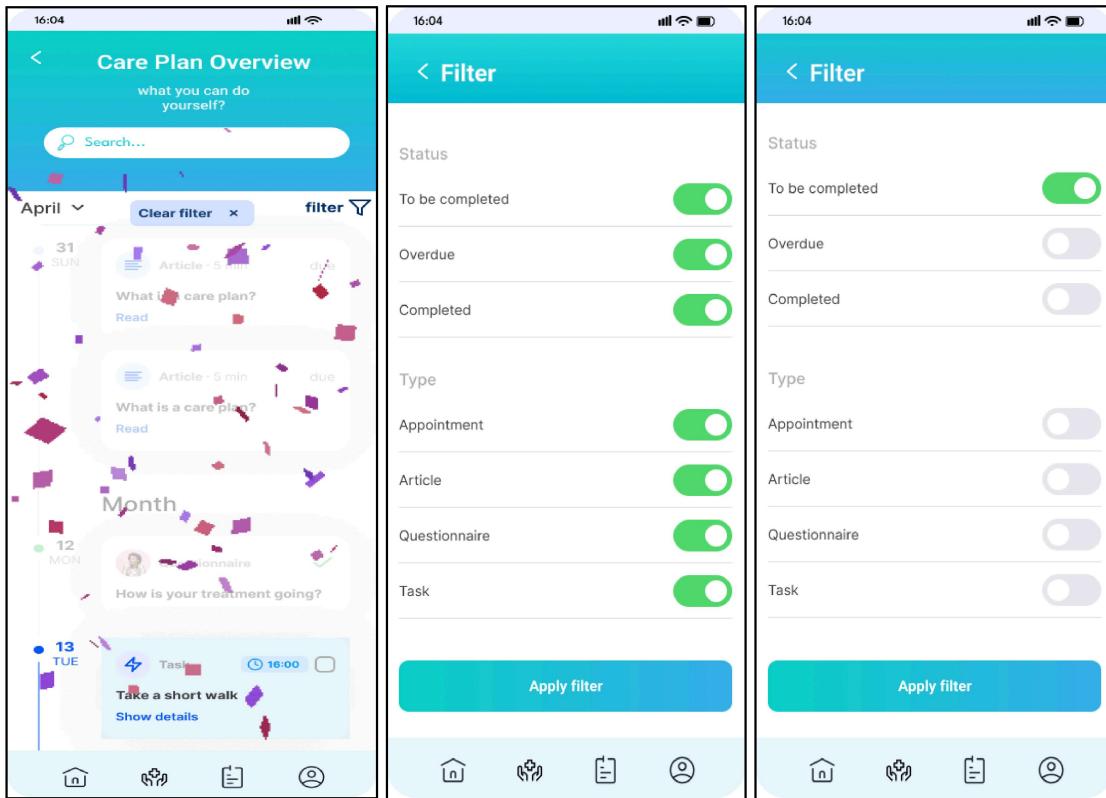
#### 3.3.1.7 - Constraints

- Care plans must be retrieved securely from the database.
- The display must differentiate overdue tasks from completed or upcoming tasks.

### 3.3.2.8 - Figma

Figure 3.3.1 View CarePlan Figma





### 3.3.2-The system must allow CNs to update care plan tasks.

#### 3.3.2.1 - Description

The system allows users to make updates to care plan tasks, such as adjusting due dates or assigning responsibilities.

#### 3.3.2.2 - Inputs

- Task ID.
- Updated task details (e.g., due date, assigned user).

#### 3.3.2.3 - Outputs

- Success: Updated task reflected in the care plan.
- Failure: Error message indicating why the update was unsuccessful.

#### 3.3.2.4 - Preconditions

- The task must exist within an active care plan.
- The user must have edit permissions for the care plan.

### 3.3.2.5 - Postconditions

- The updated task details are saved to the database.

### 3.3.2.6 - Actors

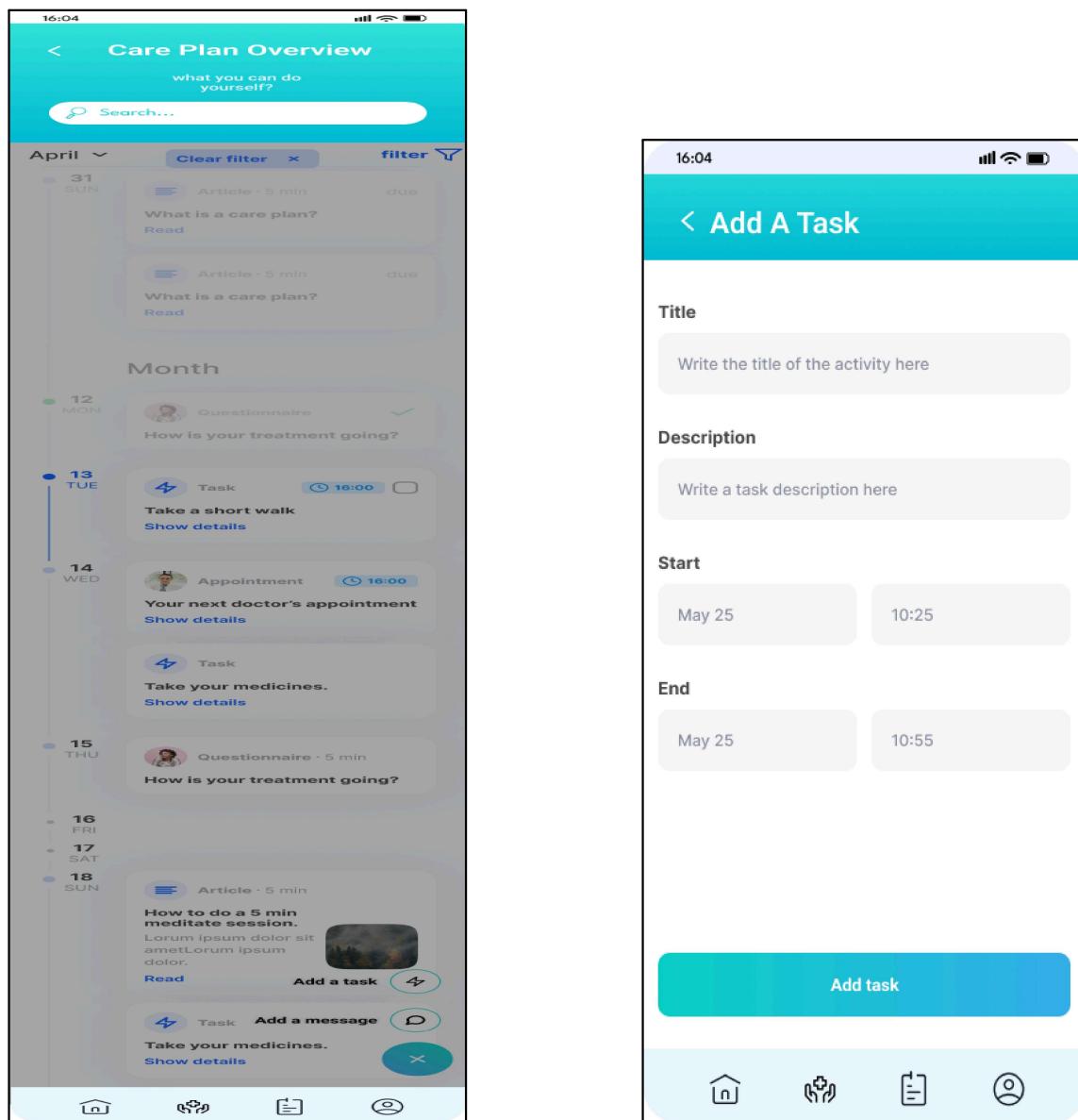
- Care Navigators: Adjust care plan details as needed.

### 3.3.2.7 - Constraints

- Updates must be logged for audit purposes.
- Notification must be sent to the responsible parties after changes.

### 3.3.2.8 - Figma

Figure 3.3.2 Update CarePlan Figma



### 3.3.3-The system must allow users to mark tasks as complete.

#### 3.3.3.1 - Description

The system enables users to mark care plan tasks as completed, updating their status in real time.

#### 3.3.3.2 - Inputs

- Task ID.

#### 3.3.3.3 - Outputs

- Success: Task status is updated to "Completed."
- Failure: Error message if the task status cannot be updated.

#### 3.3.3.4 - Preconditions

- The task must exist within an active care plan.
- The user must be assigned to the task.

#### 3.3.3.5 - Postconditions

- The task's status is updated in the database.
- Care Navigators are notified of completed tasks.

#### 3.3.3.6 - Actors

- Clients (Users): Mark tasks they are responsible for as complete.
- Care Navigators: Monitor task completion.

#### 3.3.3.7 - Constraints

- Completed tasks cannot be edited without admin permissions.

### 3.3.3.8 - Figma

Figure 3.3.3 Update Tasks Figma

The image displays two screenshots of a mobile application interface. The left screenshot shows the "Care Plan Overview" screen, which includes a search bar, a date selector set to April, and a "filter" button. Below this is a monthly calendar view for April, showing tasks and appointments for each day. The tasks include articles to read, questionnaires to complete, and specific tasks like "Take a short walk". Some tasks have checkmarks indicating completion. The right screenshot shows a detailed view of a task titled "Take A Short Walk", which includes a description, a "Mark as complete" button, and a "Delete task" button. The bottom of both screens features a navigation bar with icons for home, tasks, and profile.

**Care Plan Overview**

what you can do yourself?

Search...

April filter

31 SUN Article · 5 min due  
What is a care plan?  
Read

Article · 5 min due  
What is a care plan?  
Read

Month

12 MON Questionnaire ✓  
How is your treatment going?

13 TUE Task 16:00  
Take a short walk  
Show details

14 WED Appointment 16:00  
Your next doctor's appointment  
Don't forget to take your daily pills today. Here's what you need to take.  
Show details

Task  
Take your medicines.  
Show details

15 THU Questionnaire · 5 min  
How is your treatment going?

16 FRI

17 SAT

18 SUN Article · 5 min  
How to do a 5 min meditate session.  
Lorum ipsum dolor sit ametLorum ipsum dolor.  
Read

+ Task

**Take A Short Walk**

Task

lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Mark as complete

Delete task

Home Tasks Profile

### 3.3.4- The system must notify Care Navigators of updates to the care plan.

#### 3.3.4.1 - Description

The system sends notifications to Care Navigators whenever changes are made to a care plan, ensuring they remain updated.

#### 3.3.4.2 - Inputs

- Change event details (e.g., updated task, completion status).
- Care Navigator ID.

#### 3.3.4.3 - Outputs

- Notification sent to the assigned Care Navigator.

#### 3.3.4.4 - Preconditions

- The care plan must be active.
- The Care Navigator must be assigned to the user or plan.

#### 3.3.4.5 - Postconditions

- The Care Navigator is informed of changes to the care plan.

#### 3.3.4.6 - Actors

- Care Navigators: Receive notifications for updates.

#### 3.3.4.7 - Constraints

- Notifications must not expose sensitive user data.
- Delivery must be reliable and prompt

## 3.4 Secure Messaging

3.4.1-The system must allow users to send secure messages.

### 3.4.1.1- Description

The system enables users to send secure, HIPAA-compliant messages to Care Navigators through an internal messaging interface.

### 3.4.1.2 - Inputs

- Sender ID.
- Receiver ID (Care Navigator).
- Message content.

### 3.4.1.3-Outputs

- Success: Message is stored in the database and delivered to the Care Navigator.
- Failure: Error message if the message cannot be sent.

### 3.4.1.4- Preconditions

- Both sender and receiver must be registered users of the system.
- The sender must have access to the messaging feature.

### 3.4.1.5- Postconditions

- The message is securely stored and delivered.
- Notification is sent to the receiver.

### 3.4.1.6 - Actors

- Clients (Users): Send messages to Care Navigators.
- Care Navigators: Receive and respond to messages.

### 3.4.1.7 - Constraints

- Messages must be encrypted during transmission and at rest.
- The system must prevent messages containing unauthorized file types.

3.4.2-The system must allow users to receive secure messages.

### 3.4.2.1 - Description

Users can view messages sent by Care Navigators through the secure messaging interface.

### 3.4.2.2 - Inputs

- Receiver ID (User).
- Message query parameters (e.g., date range).

### 3.4.2.3 - Outputs

- Success: Retrieved messages displayed to the user.
- Failure: Error message if messages cannot be retrieved.

### 3.4.2.4 - Preconditions

- The user must be authenticated and have access to the messaging feature.

### 3.4.2.5 - Postconditions

- Messages are displayed to the user in the messaging interface.

### 3.4.2.6 - Actors

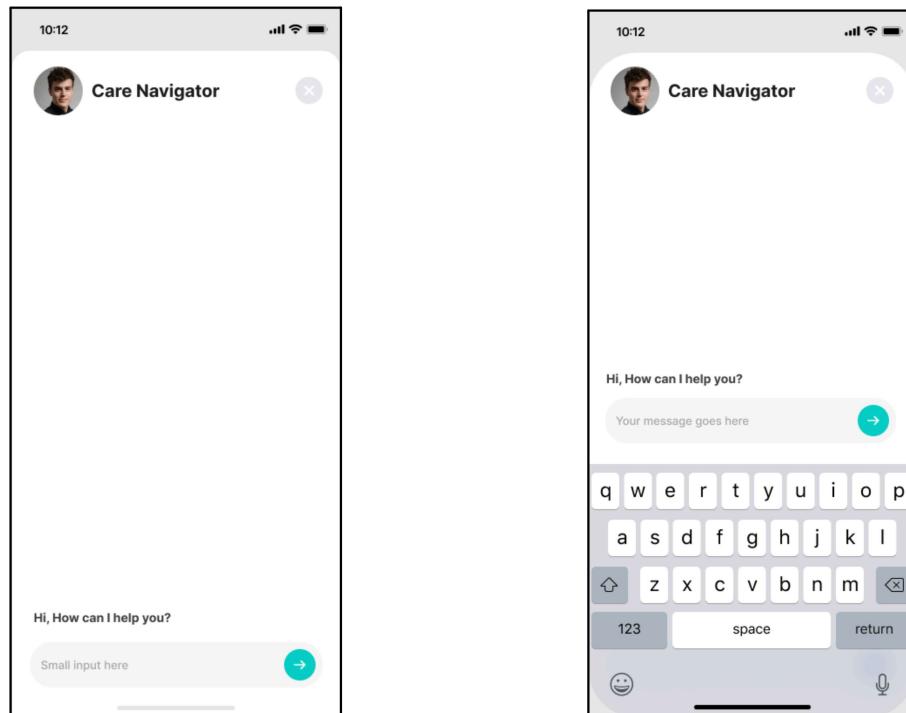
- Clients (Users): View messages from Care Navigators.
- Care Navigators: Send messages to users.

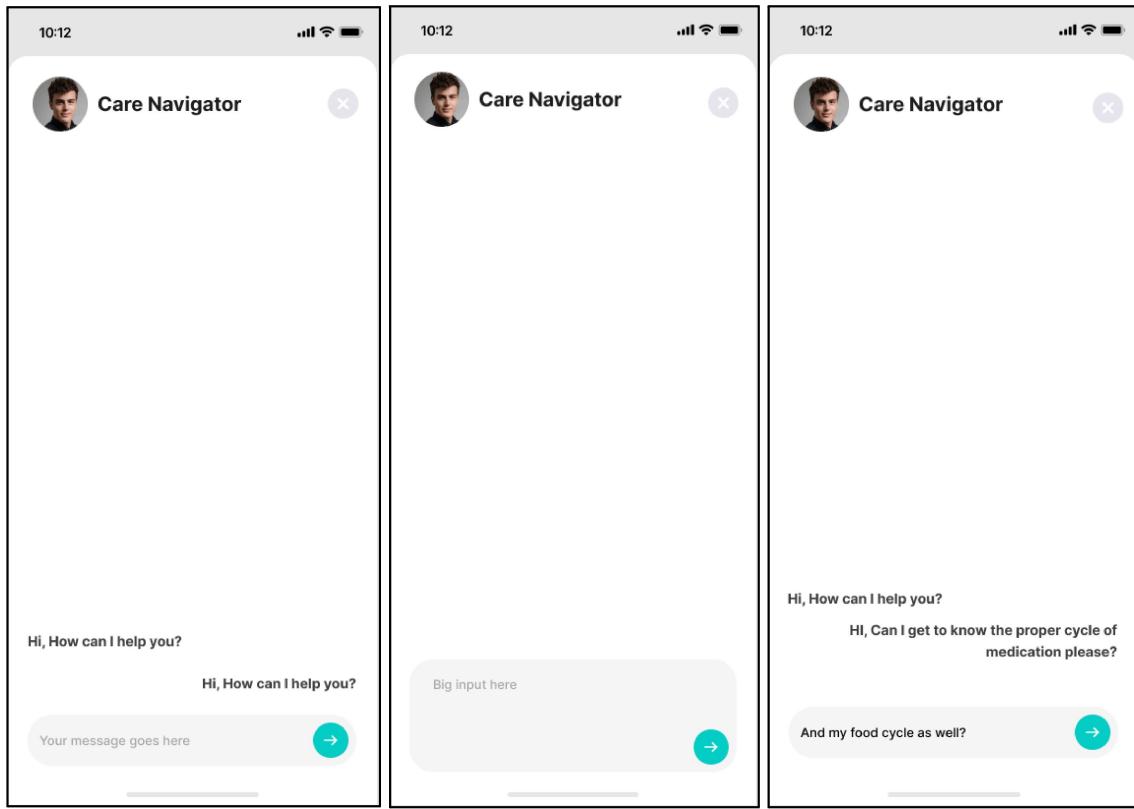
### 3.4.2.7 - Constraints

- Messages must be accessible only by the intended recipient.
- Retrieval must be optimized for performance.

### 3.4.2.8 - Figma

Figure 3.4.1 Message Figma





### 3.4.3-The system must notify users of new messages.

#### 3.4.3.1 - Description

The system sends notifications to users when they receive new messages from Care Navigators.

#### 3.4.3.2 - Inputs

- New message event (sender ID, receiver ID, timestamp).

#### 3.4.3.3 - Outputs

- Notification sent to the receiver.

#### 3.4.3.4 - Preconditions

- The user must have messaging notifications enabled.
- A new message must exist in the database.

#### 3.4.3.5 - Postconditions

- The user is notified of the new message.

#### 3.4.3.6 - Actors

- Clients (Users): Receive notifications.

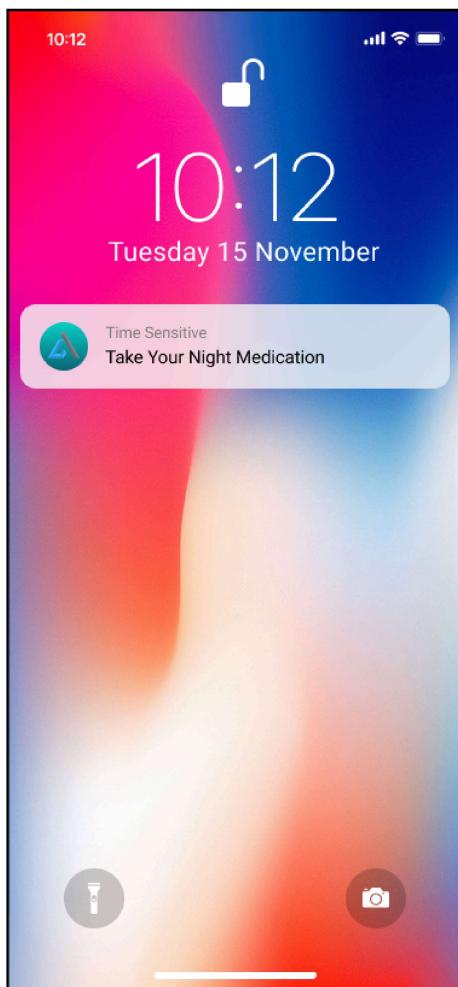
- Care Navigators: Trigger notifications by sending messages.

#### 3.4.3.7 - Constraints

- Notifications must not include sensitive message content.
- Delivery must be prompt and reliable.

#### 3.4.3.8 - Figma

Figure 3.4.2 Message Notification Figma



## 3.5 Document Upload

3.5.1- The system must allow users to upload care-related documents.

### 3.5.1.1 - Description

Users can upload documents related to their care plans (e.g., prescriptions, medical records) securely through the system.

### 3.5.1.2 - Inputs

- File to be uploaded (e.g., PDF, Word document).

### 3.5.1.3 - Outputs

- Success: Document is securely stored in the system.
- Failure: Error message if upload fails due to invalid file type, size, or connectivity issues.

### 3.5.1.4 - Preconditions

- The user must be authenticated.
- The document must meet the allowed file type and size criteria.

### 3.5.1.5 - Postconditions

- The uploaded document is saved in the storage system (e.g., AWS S3).

### 3.5.1.6 - Actors

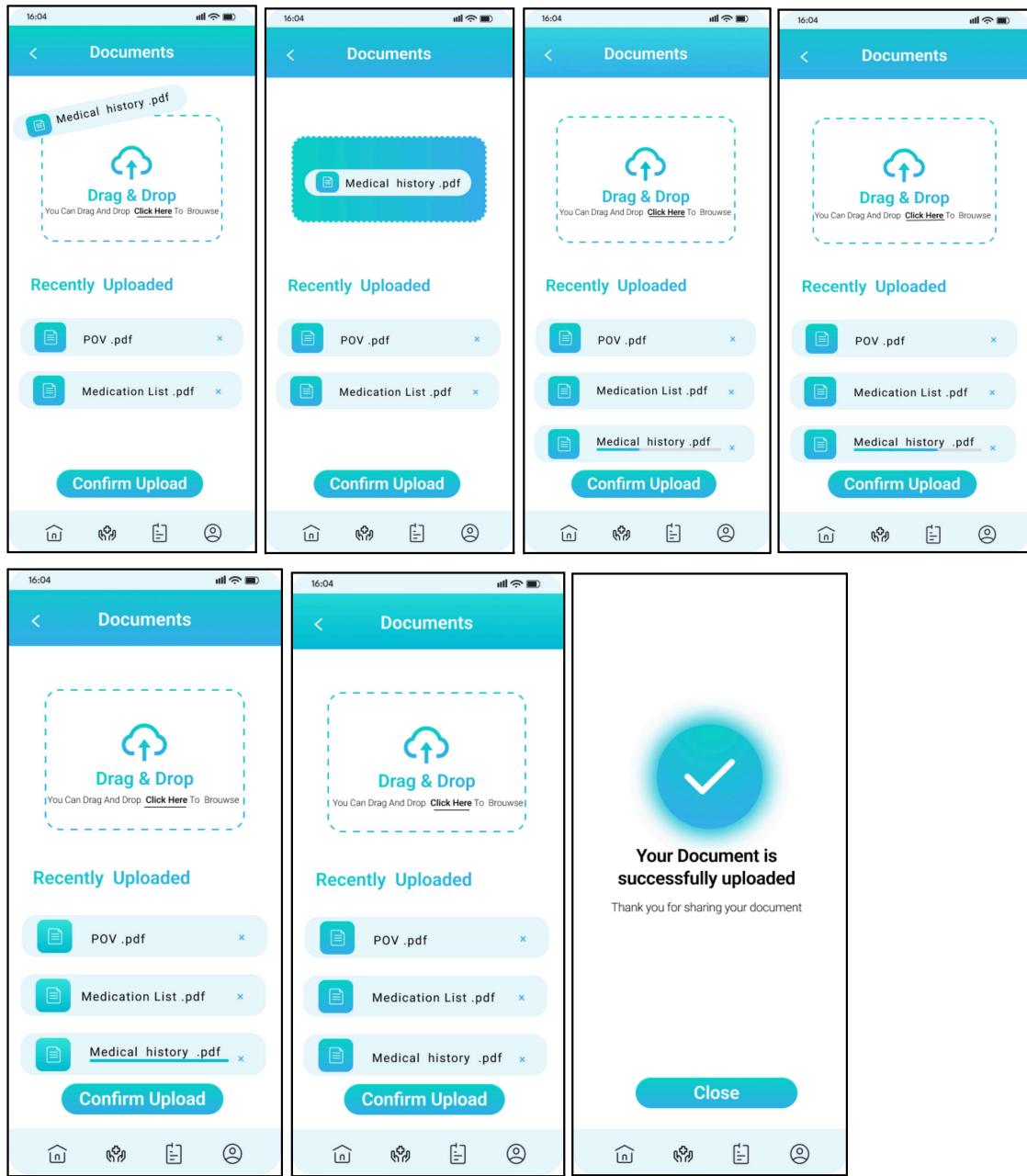
- Clients (Users): Upload care-related documents.
- Care Navigators: View uploaded documents.

### 3.5.1.7 - Constraints

- Maximum file size restrictions (e.g., 10 MB per file).
- Allowed file types must be defined (e.g., PDF, JPEG, PNG).
- Files must be encrypted during upload and at rest.

### 3.5.1.8 - Figma

Figure 3.5.1 Upload Documents Figma



### **3.5.2-The system must encrypt documents during upload and storage.**

#### **3.5.2.1 - Description**

All uploaded documents are encrypted both during transmission and while stored in the system to ensure security and compliance with privacy regulations.

#### **3.5.2.2 - Inputs**

- File for upload.

#### **3.5.2.3 - Outputs**

- Success: The file is stored in an encrypted format.
- Failure: Error message if encryption fails.

#### **3.5.2.4 - Preconditions**

- The file must be valid and meet system criteria.

#### **3.5.2.5 - Postconditions**

- The file is encrypted and stored securely.

#### **3.5.2.6 - Actors**

- System: Encrypts files during upload and at rest.
- Clients (Users): Upload encrypted files.

#### **3.5.2.7 - Constraints**

- Encryption must meet industry standards (e.g., AES-256).
- Files must be stored in a HIPAA-compliant storage system (e.g., AWS S3 with encryption enabled).

### **3.5.3- The system must allow Care Navigators to view uploaded documents.**

#### **3.5.3.1 - Description**

Care Navigators can securely access and view documents uploaded by users for better care management.

#### **3.5.3.2 - Inputs**

- Request from Care Navigator (includes user ID or document ID).

### 3.5.3.3 - Outputs

- The document is retrieved and displayed for the Care Navigator.
- Failure: Error message if document retrieval fails.

### 3.5.3.4 - Preconditions

- The document must exist in the storage system.
- The Care Navigator must have the appropriate permissions to view the document.

### 3.5.3.5 - Postconditions

- The document is securely retrieved and displayed to the Care Navigator.

### 3.5.3.6 - Actors

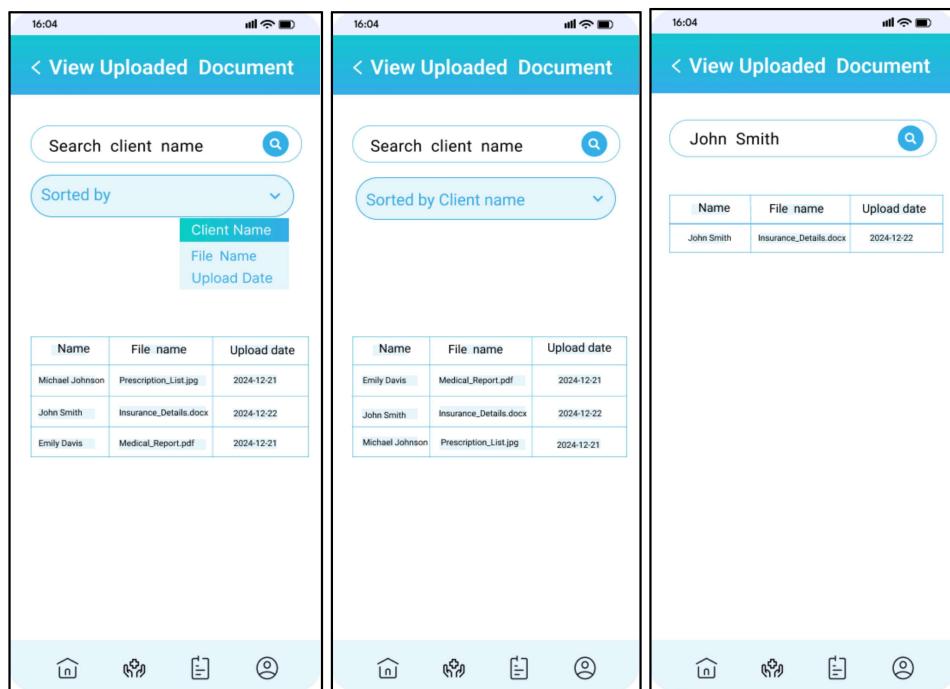
- Care Navigators: View and manage uploaded documents.

### 3.5.3.7 - Constraints

- Document access must be role-restricted.
- Documents must not be cached locally unless necessary and must be encrypted if so.

### 3.5.3.8 - Figma

Figure 3.5.2 View Documents Figma



## 3.6 Readiness Questionnaire

### 3.6.1 - Display Questionnaire

#### 3.6.1.1 - Description

The system displays a predefined set of readiness questions to users after they click the "**Need a Consultation**" button. These questions prompt users to reflect on their situation and determine if they need to proceed with scheduling a consultation.

#### 3.6.1.2 - Inputs

- User interaction with the questionnaire

#### 3.6.1.3 - Outputs

- User responses to the questions (stored only if the user confirms proceeding to consultation).

#### 3.6.1.4 - Preconditions

- The user must be logged into the system.
- The "Need a Consultation" button must trigger the questionnaire.

#### 3.6.1.5 - Postconditions

- If the user completes the questionnaire and chooses to proceed, the responses are saved.
- If the user cancels, no data is stored.

#### 3.6.1.6 - Actors

- Client

#### 3.6.1.7 - Constraints

- The questions must be concise and directly relevant to the user's decision.

### 3.6.1.8 - Figma

Figure 3.6.1 Readiness Questionnaire Figma

The screenshot shows a mobile application titled "Readiness Questionnaire". The screen displays five questions with "NO" and "YES" buttons. Question 1: "1. Experiencing any new or worsening symptoms?" (NO button is red, YES button is green). Question 2: "2. Faced any challenges in following your care plan or medications?" (NO button is red, YES button is green). Question 3: "3. Need assistance in understanding or managing your care plan?" (NO button is red, YES button is green). Question 4: "4. Are there changes in lifestyle or health goals that you'd like to discuss?" (NO button is red, YES button is green). Question 5: "5. Already tried resolving concerns with available resources?" (NO button is red, YES button is green). Below the questions is a confirmation message: "Are you sure you need a consultation?". At the bottom are "Cancel" and "Submit" buttons. The bottom navigation bar includes icons for home, back, forward, and profile.

## 3.6.2 - Submit Answers

### 3.6.2.1 - Description

If the user selects "Yes" to proceed with consultation, their answers are submitted and stored securely for reference during the consultation process.

### 3.6.2.2 - Inputs

- User responses to readiness questions.

### 3.6.2.3 - Outputs

- Answers are saved in the database.

### 3.6.2.4 - Preconditions

- The user has answered all questions.

### 3.6.2.5 - Postconditions

- The answers are stored and linked to the user's profile.

### 3.6.2.6 - Actors

- Client
- System

## 3.6.3 - Cancel Questionnaire

### 3.6.3.1 - Description

If the user selects "**Cancel**", no data is recorded, and the user is redirected to their Dashboard.

### 3.6.3.2 - Inputs

- User selection to cancel the questionnaire.

### 3.6.3.3 - Outputs

- Redirect to Dashboard.

### 3.6.3.5 - Postconditions

- User returns to the Dashboard without saving any responses.

### 3.6.3.6 - Actors

- Client

### 3.6.3.7 - Constraints

- The system must ensure no partial data is stored for canceled sessions

## 3.7- Medication Management

3.7.1: The system must allow users to input medication schedules.

### 3.7.1.1 - Description

The system enables users to record their medication schedules, including the name, dosage, and timing of medications.

### 3.7.1.2 - Inputs

- Medication name.
- Dosage details (e.g., quantity, units).
- Schedule (e.g., daily, weekly).
- Start and end dates.

### 3.7.1.3 - Outputs

- Success: Medication schedule is saved in the system.
- Failure: Error message if input validation fails or data cannot be saved.

### 3.7.1.4 - Preconditions

- The user must be authenticated.
- The medication schedule must adhere to system-defined formats.

### 3.7.1.5 - Postconditions

- The medication schedule is stored in the database and linked to the user's profile.

### 3.7.1.6 - Actors

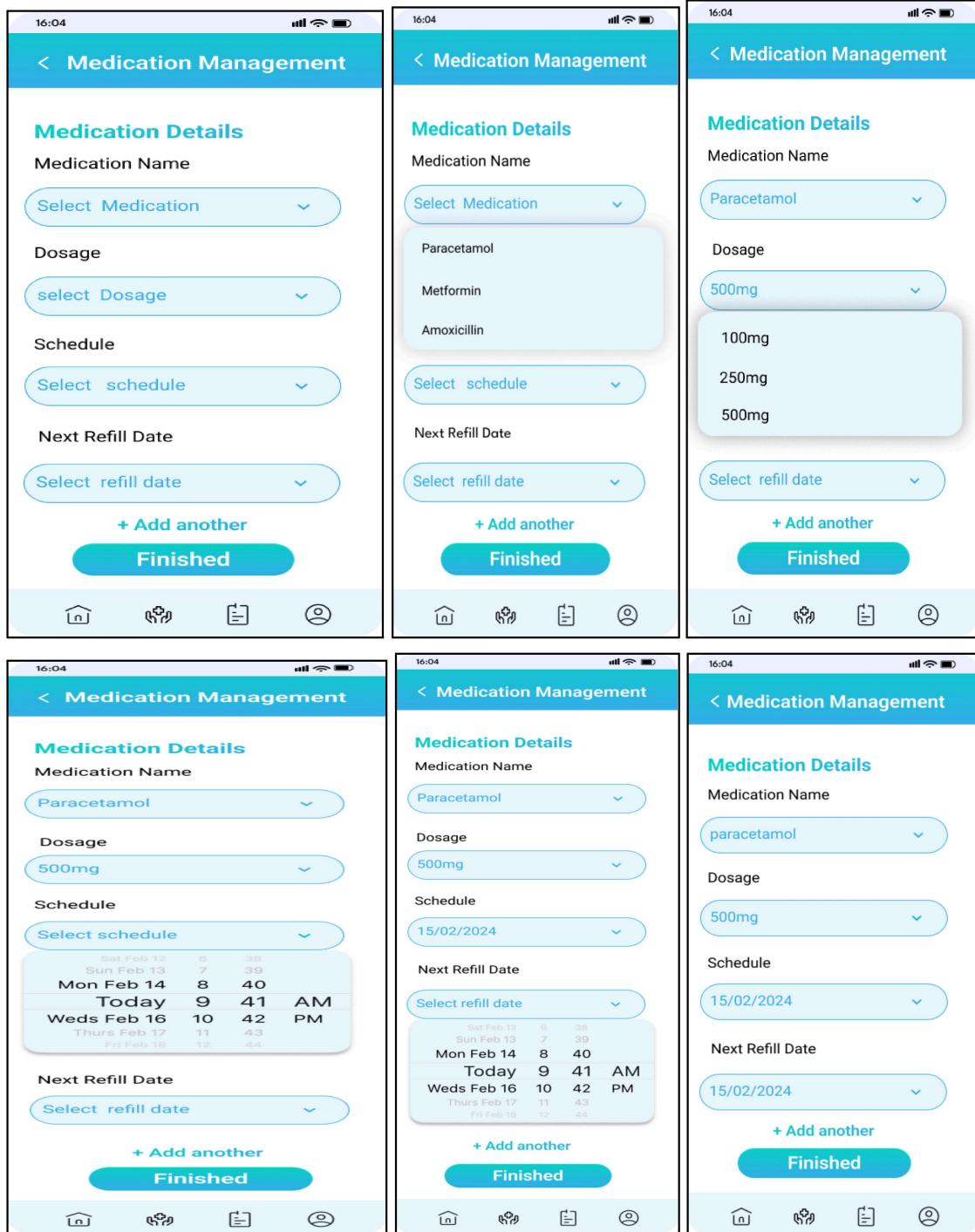
- Clients (Users): Input and manage their medication schedules.
- Care Navigators: View users' medication schedules.

### 3.7.1.7 - Constraints

- Input validation must ensure correct formats (e.g., numeric dosage).
- Scheduled data must be stored securely to comply with privacy regulations.

### 3.7.1.8 - Figma

Figure 3.7.1 Input Medication Figma



The figure consists of three side-by-side screenshots of a mobile application interface titled "Medication Management".

- Screenshot 1:** Shows fields for Medication Name (dropdown: paracetamol), Dosage (dropdown: 500mg), Schedule (dropdown: 15/02/2024), and Next Refill Date (dropdown: 15/02/2024). Below these are buttons for "+ Add another" and "Enter another Medication field".
- Screenshot 2:** Similar to Screenshot 1, but the "Next Refill Date" field is empty.
- Screenshot 3:** Similar to Screenshot 1, but includes a Frequency field (dropdown: Twice Daily) below the "Schedule" field. It also has a "Finished" button at the bottom.

3.7.2: The system must notify users of upcoming medication times.

#### 3.7.2.1 - Description

The system sends notifications to users as reminders for upcoming medication times.

#### 3.7.2.2 - Inputs

- User's medication schedule.
- Current system time.

#### 3.7.2.3 - Outputs

- Notification sent to the user with medication details.
- Failure: Error if notifications cannot be sent.

#### 3.7.2.4 - Preconditions

- The medication schedule must be saved in the system.
- The current time must match or precede the scheduled time for a reminder.

#### 3.7.2.5 - Postconditions

- The user is reminded about their medication.

#### 3.7.2.6 - Actors

- Clients (Users): Receive medication notifications.

#### 3.7.2.7 - Constraints

- Notifications must not contain sensitive data (e.g., medication name in a push notification).
- Delivery must be reliable and timely.

### 3.7.3: The system must track when medications have been taken.

#### 3.7.3.1 - Description

The system allows users to log when they have taken their medications for tracking purposes.

#### 3.7.3.2 - Inputs

- User ID.
- Medication ID.
- Date and time of medication taken.

#### 3.7.3.3 - Outputs

- Success: Log is saved in the system.
- Failure: Error message if data cannot be saved.

#### 3.7.3.4 - Preconditions

- The medication must exist in the user's schedule.

#### 3.7.3.5 - Postconditions

- The medication log is stored in the database.
- Care Navigators can view the tracking history.

#### 3.7.3.6 - Actors

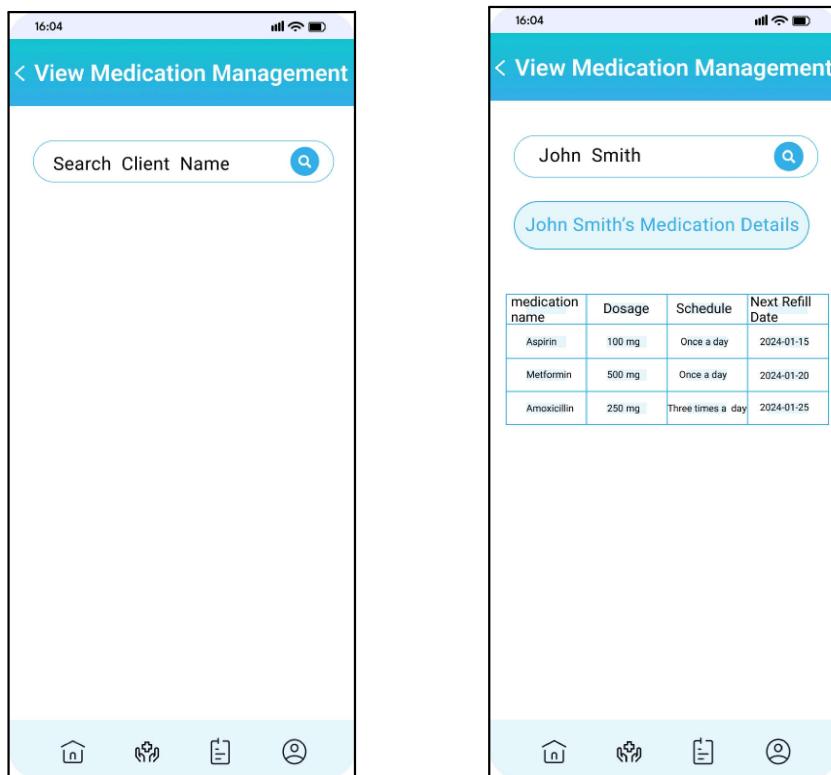
- Clients (Users): Log medication intake.
- Care Navigators: Monitor user adherence.

### 3.7.3.7 - Constraints

- Data integrity must be ensured for accurate tracking.
- Logs must be time-stamped accurately.

### 3.7.3.8 - Figma

Figure 3.7.2 View Medication Figma



### 3.7.4: The system must notify users of prescription refills.

#### 3.7.4.1 - Description

The system sends notifications to users reminding them to refill prescriptions based on the medication schedule.

#### 3.7.4.2 - Inputs

- Medication details (e.g., refill interval).
- Current system date.

#### 3.7.4.3 - Outputs

- Notification sent to the user.
- Failure: Error if the reminder cannot be sent.

#### 3.7.4.4 - Preconditions

- The medication schedule must include refill intervals.
- The current date must match or exceed the refill reminder date.

#### 3.7.4.5 - Postconditions

- The user is reminded to refill their prescription.

#### 3.7.4.6 - Actors

- Clients (Users): Receive refill reminders.
- Care Navigators: Monitor prescription adherence if needed.

#### 3.7.4.7 - Constraints

- Refill notifications must be sent in advance to ensure timely refills.
- Delivery must be reliable.

### 3.8 - Appointment Scheduling

#### 3.8.1- Redirect to Calendly for Appointment Scheduling.

##### 3.8.1.1 - Description

After answering "Yes" in the readiness questionnaire, the user is redirected to a Calendly app to book an appointment.

##### 3.8.1.2 - Inputs

- Username.
- Calendly webview URL

##### 3.8.1.3 - Outputs

- Success: Appointment is booked in Calendly.
- Failure: Error message if the appointment could not be booked.

##### 3.8.1.4 - Preconditions

- The user must complete the readiness questionnaire and answer "Yes."

### 3.8.1.5 - Postconditions

- The user completes the appointment booking process in Calendly.

### 3.8.1.6 - Actors

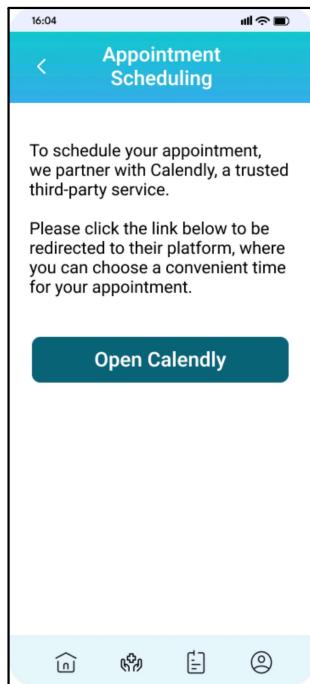
- Clients (Users): Book appointments.
- Calendly System: Manage scheduling logic.

### 3.8.1.7 - Constraints

- The user should not navigate away until the appointment is confirmed.

### 3.8.1.8 - Figma

Figure 3.8.1 Redirect to Calendly Figma



## 3.8.2 - The system must allow users to book appointments.

### 3.8.2.1 - Description

Users can book appointments by selecting a suitable time slot through calendly.

### 3.8.2.2 - Inputs

- Username.
- Email.
- Selected appointment slot.

### 3.8.2.3 - Outputs

- Success: Appointment booking confirmation.
- Failure: Error message if the slot is no longer available.

### 3.8.2.4 - Preconditions

- The selected appointment slot must be available.

### 3.8.2.5 - Postconditions

- The appointment is saved in the system and linked to the user and Care Navigator.

### 3.8.2.6 - Actors

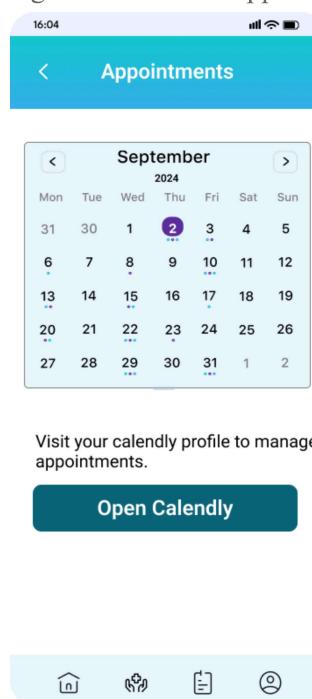
- Client
- Care Navigator

### 3.8.2.7 - Constraints

- Double-booking must be prevented.

### 3.8.2.8 - Figma

Figure 3.8.2 View Appointments Figma



### **3.8.3 - Capture Appointment Details.**

#### **3.8.3.1 - Description**

After the user submits an appointment, the app captures the confirmation details.

#### **3.8.3.2 - Inputs**

- Appointment confirmation payload (JSON).

#### **3.8.3.3 - Outputs**

- Success: Appointment details are stored in the app.
- Failure: Error message if details cannot be captured.

#### **3.8.3.4 - Preconditions**

- Calendly must successfully confirm the appointment.

#### **3.8.3.5 - Postconditions**

- Appointment data is saved.

#### **3.8.3.6 - Actors**

- System

#### **3.8.3.7 - Constraints**

- Payload must be securely parsed and stored.

### **3.8.4 - Create Dashboard Countdown Notification.**

#### **3.8.4.1 - Description**

The app generates a countdown notification for the user's dashboard based on the scheduled appointment time.

#### **3.8.4.2 - Inputs**

- Appointment details (start time, end time).
- Current system time.

### 3.8.4.3 - Outputs

- Countdown displayed in the user's dashboard.

### 3.8.4.4 - Preconditions

- Appointment details must be captured and saved.

### 3.8.4.5 - Postconditions

- The countdown updates dynamically until the appointment time.

### 3.8.4.6 - Actors

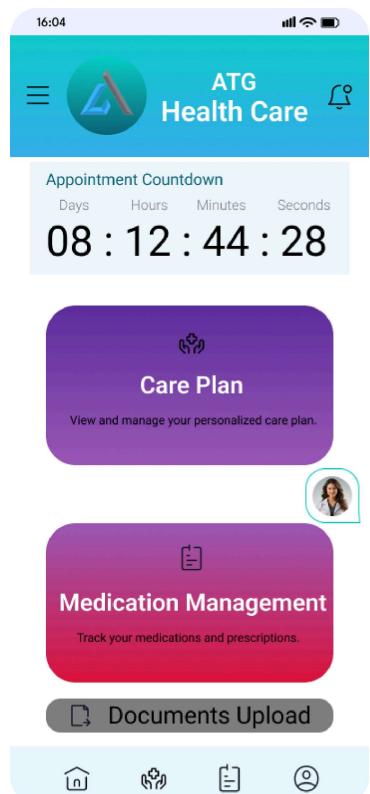
- Client
- System

### 3.8.4.7 - Constraints

- Notifications must be user-friendly.

### 3.8.4.8 - Figma

Figure 3.8.3 Appointment Countdown Figma



## 3.9 - Care Intake Form

### 3.9.1- The system must allow users to complete a care intake form.

#### 3.9.1.1 - Description

The system provides an interactive form for users to enter their personal information, medical history, and care requirements.

#### 3.9.1.2 - Inputs

- Personal details (e.g., name, age, contact information).
- Medical history (e.g., conditions, allergies).
- Care preferences (e.g., preferred schedule, type of care).

#### 3.9.1.3 - Outputs

- Success: Form data is validated and saved in the system.
- Failure: Error message if validation fails or required fields are missing.

#### 3.9.1.4 - Preconditions

- The user must be authenticated.
- The intake form template must be available in the system.

#### 3.9.1.5 - Postconditions

- The intake form data is stored securely in the database and linked to the user's profile.

#### 3.9.1.6 - Actors

- Clients (Users): Fill out the intake form.
- Care Navigators: Review submitted forms.

#### 3.9.1.7 - Constraints

- The form must be user-friendly and responsive.
- Required fields must be clearly marked.

### 3.9.1.8 - Figma

Figure 3.9.1 Care Intake Form Figma

The figure displays six screenshots of a mobile application interface for a care intake form, arranged in two rows of three. The top row shows the 'Personal Information' section, and the bottom row shows the 'Health Conditions' section.

**Personal Information Screenshots:**

- Step 1:** Shows fields for 'Full Name' (empty), 'Date Of Birth' (placeholder 'DD / MM / YYYY'), 'Gender' (radio buttons for Male and Female), 'Contact Number' (empty), and 'Home Address' (empty). A 'Continue' button is at the bottom.
- Step 2:** Shows the same fields filled with 'John Doe' and '19/02/1960'. The gender selection is Male. The 'Date Of Birth' field has a date picker showing September 2021, with the 19th selected. A 'Continue' button is at the bottom.
- Step 3:** Shows the same fields filled. The gender selection is Female. The 'Contact Number' field contains '0712345678'. The 'Home Address' field contains 'No 27, Sea Street, Galle'. A 'Continue' button is at the bottom.

**Health Conditions Screenshots:**

- Step 1:** Shows 'Current Medical Conditions' with checkboxes for Diabetes, Hypertension, Arthritis, Heart Disease, and Other... Below are sections for 'Known Allergies' (placeholder 'List Any Known Allergies...') and 'Current Medications' (placeholder 'List All Current Medications...'). Below that is 'History Of Surgeries/Procedures' (placeholder 'List Any Surgeries Or Medical Procedures...'). Buttons for 'Back' and 'Continue' are at the bottom.
- Step 2:** Shows the same sections filled with medical conditions. The 'Known Allergies' field contains 'Peanuts, Shellfish, Penicillin, Pollen'. The 'Current Medications' field contains 'Paracetamol 500 Mg Twice Daily For Fever Metformin To Manage Type 2 Diabetes'. The 'History Of Surgeries/Procedures' field contains 'Appendectomy – May 2019 Knee Surgery – March 2022'. Buttons for 'Back' and 'Continue' are at the bottom.
- Step 3:** Shows the same sections filled. The 'Known Allergies' field contains 'Enter Your Reason Here...'. The 'Current Medications' field contains 'List All Current Medications...'. The 'History Of Surgeries/Procedures' field contains 'History Of Surgeries/Procedures'. A keyboard is visible at the bottom.

**Care Needs And Preferences**

**Primary Reason For Care**

Describe The Primary Reason For Care...

**Current Medical Conditions**

- Weekdays  Weekends
- Morning  Evening

**Special Assistance Needed**

- Mobility  Hypertension
- Medication Management  Hygiene

**Additional Notes**

Provide Any Additional Details...

**Care Needs And Preferences**

**Primary Reason For Care**

My Mother Requires Supervision And Help With Meal Preparation And Medication Management As She Has Early-Stage Dementia.

**Current Medical Conditions**

- Weekdays  Weekends
- Morning  Evening

**Special Assistance Needed**

- Mobility  Hypertension
- Medication Management  Hygiene

**Additional Notes**

Needs Help With Pets At Home. Prefers Morning Appointments. Has A Service Dog.

**Emergency Contact Information**

**Emergency Contact Name**

**Emergency Contact Number**

**Relationship To Emergency Contact**

**Back**

**Continue**

**Back**

**Continue**

**Back**

**Continue**

**Care Intake Form**

**Full Name**  
John Doe

**Date Of Birth**  
19/02/1960

**Gender**  
Male

**Contact Number**  
0712345678

**Home Address**  
No 27, Sea Street, Galle

**Emergency Contact Name**  
Frank Devid

**Emergency Contact Number**  
0761357892

**Relationship To Emergency Contact Number**  
Cousin Brother

**Current Medication Conditions**

I Confirm The Information Provided Is Accurate And Consent To Care Services.

**Emergency Contact Information**

**Emergency Contact Name**  
Frank Devid

**Emergency Contact Number**  
0761357892

**Relationship To Emergency Contact**  
Cousin Brother



Your Form is successfully Submitted

Thank you for getting in touch!

**Back**

**Submit**

### **3.9.2- The system must validate inputs on the intake form.**

#### **3.9.2.1 - Description**

The system validates user inputs on the form to ensure completeness and accuracy.

#### **3.9.2.2 - Inputs**

- Data entered by the user in the form fields.

#### **3.9.2.3 - Outputs**

- Success: Data passes validation checks.
- Failure: Error messages displayed for invalid inputs (e.g., "Phone number is invalid").

#### **3.9.2.4 - Preconditions**

- The user must have completed the form.

#### **3.9.2.5 - Postconditions**

- Valid data is allowed to proceed to submission.
- Invalid data prompts corrections by the user.

#### **3.9.2.6 - Actors**

- Clients (Users): Input form data.
- System: Validates form data.

#### **3.9.2.7 - Constraints**

- Validation rules must include field-specific checks (e.g., date formats, required fields).
- Validation should happen on both the frontend and backend.

### **3.9.3- The system must store intake form data securely.**

#### **3.9.3.1 - Description**

The system stores completed and validated form data securely in the database for further review and analysis.

#### **3.9.3.2 - Inputs**

- Validated form data.

### 3.9.3.3 - Outputs

- Success: Data is securely stored in the database.
- Failure: Error message if storage fails.

### 3.9.3.4 - Preconditions

- Form data must pass all validation checks.

### 3.9.3.5 - Postconditions

- Form data is saved and linked to the user's profile.

### 3.9.3.6 - Actors

- System: Stores validated data securely.
- Care Navigators: Access stored intake data.

### 3.9.3.7 - Constraints

- Data must be encrypted at rest.
- Only authorized personnel can access the stored data.

## 3.10 - Notifications

### 3.10.1-The system must notify users of overdue tasks.

#### 3.10.1.1 - Description

The system sends notifications to users about tasks in their care plan that are overdue, helping them stay on track with their responsibilities.

#### 3.10.1.2 - Inputs

- User ID.
- Task status (e.g., overdue).
- Task details (e.g., due date, description).

#### 3.10.1.3 - Outputs

- Notification sent to the user, specifying the overdue task(s).
- Failure: Error message if the notification cannot be sent.

#### 3.10.1.4 - Preconditions

- The user must have tasks assigned in their care plan.
- The tasks must be marked as overdue in the system.

#### 3.10.1.5 - Postconditions

- The user is informed about overdue tasks.

#### 3.10.1.6 - Actors

- Clients (Users): Receive notifications.
- System: Monitors task status and triggers overdue notifications.

#### 3.10.1.7 - Constraints

- Notifications must be reliable and timely.
- Sensitive task details should not be exposed directly in notifications.

### 3.10.2 - The system must notify users of updates to their care plans.

#### 3.10.2.1 - Description

The system sends notifications to users whenever their care plans are updated by Care Navigators.

#### 3.10.2.2 - Inputs

- Care plan update event (e.g., new tasks added, deadlines changed).
- User ID associated with the care plan.

#### 3.10.2.3 - Outputs

- Notification sent to the user.
- Failure: Error message if notification delivery fails.

#### 3.10.2.4 - Preconditions

- The care plan must exist in the system.
- The update event must be logged in the system.

#### 3.10.2.5 - Postconditions

- The user is informed of the care plan updates.

### 3.10.2.6 - Actors

- Clients (Users): Receive notifications about care plan changes.
- Care Navigators: Trigger updates by modifying care plans.

### 3.10.2.7 - Constraints

- Notifications must include only relevant information (e.g., tasks or deadlines).
- Delivery must be consistent across platforms (e.g., email, app notifications).

## 3.10.3-The system must notify Care Navigators of user requests.

### 3.10.3.1 - Description

The system notifies Care Navigators when users submit requests (e.g., for assistance, changes in the care plan, or medication issues).

### 3.10.3.2 - Inputs

- User request details (e.g., type of request, timestamp).
- Care Navigator ID.

### 3.10.3.3 - Outputs

- Notification sent to the Care Navigator.
- Failure: Error message if notification cannot be sent.

### 3.10.3.4 - Preconditions

- The user must submit a valid request.
- The Care Navigator must be associated with the user's care plan.

### 3.10.3.5 - Postconditions

- The Care Navigator is informed of the user's request and can take action.

### 3.10.3.6 - Actors

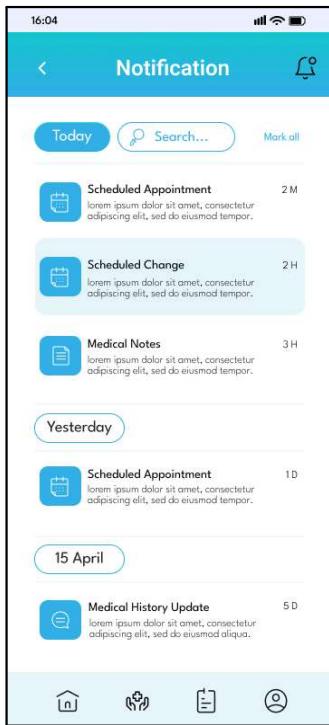
- Clients (Users): Submit requests.
- Care Navigators: Receive notifications about user requests.

### 3.10.3.7 - Constraints

- Notifications must clearly indicate the nature of the request.
- Delivery must ensure no delays or missed requests.

### 3.10 - Figma

Figure 3.10.1 Notifications Figma



## 3.11 Admin Panel Features

### 3.11.1 - Create New Admin or Care Navigator Accounts

#### 3.11.1.1 - Description

The system allows administrators to create new accounts for other admins or care navigators, specifying their roles.

#### 3.11.1.2 - Inputs

- Username
- Email
- Role (admin or care navigator).

#### 3.11.1.3 - Outputs

- Success: New account is created and credentials are sent to the registered email.
- Failure: Error message if account creation fails (e.g., duplicate email).

### 3.11.1.5 - Postconditions

- The new account is created, and the user is notified via email.

### 3.11.1.6 - Actors

- Administrator
- System

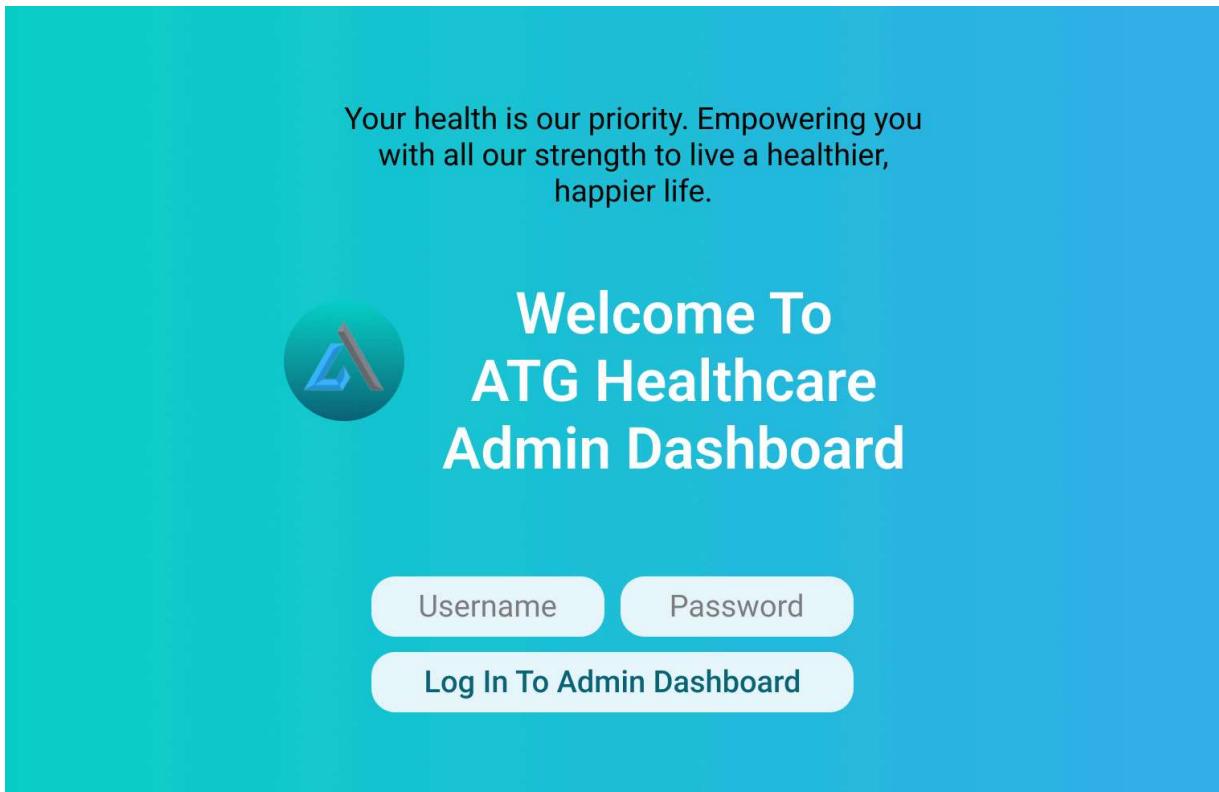
### 3.11.1.7 - Constraints

- Email addresses must be unique within the system.

### 3.11.1.8 - Figma

Figure 3.11.1 Admin Create Accounts and Manage Figma

The screenshot shows a web-based application for managing users. At the top, there is a navigation bar with the logo 'ATG Healthcare' and the following menu items: Home, Users (which is highlighted in white), Care Plans, Tasks, Messaging, and Reports. On the far right of the header, there is a circular profile icon labeled 'Admin'. The main content area has a light blue background and features a form titled 'User Management - Add New User'. The form contains four input fields: 'Username' (containing 'JaneDoe'), 'Email' (containing 'janedoe@gmail.com'), 'Calendly Username (Optional)' (containing 'CNJaneDoe'), and 'Role' (containing 'Care Navigator'). A dropdown arrow next to 'Role' indicates that other roles can be selected. Below the form are two buttons: 'Cancel' (in a light blue rounded rectangle) and 'Add' (in a blue rounded rectangle). The overall design is clean and modern, using a color palette of blues, whites, and greys.



The image is a screenshot of the "User Management" section within the ATG Healthcare Admin Dashboard. The top navigation bar includes links for Dashboard, Users (which is the active tab), Care Plans, Tasks, Messages, and Reports, along with a user profile icon for "Admin". Below the navigation is a search bar with the placeholder "Search users...". A table displays user information with columns for Name, Email, Role, Status, and Actions. Two users are listed:

Name	Email	Role	Status	Actions
John Doe	john.doe@example.com	Care Navigator	Active	<a href="#">Edit</a> <a href="#">Delete</a>
Jane Smith	jane.smith@example.com	Care Navigator	Inactive	<a href="#">Edit</a> <a href="#">Delete</a>

### 3.11.2 - Oversee and Manage Care Plans

#### 3.11.2.1 - Description

The admin can view, approve, comment on, or reject care plans submitted by care navigators.

#### 3.11.2.2 - Inputs

- Care plan details.
- Admin actions (approve, reject, or comment).
- Optional comments.

#### 3.11.2.3 - Outputs

- Success: Care plan status is updated and displayed in client care plans.

#### 3.11.2.4 - Preconditions

- The care plan must exist in the system.

#### 3.11.2.6 - Actors

- Administrator
- Care Navigator
- Client

### 3.11.2.8 - Figma

Figure 3.11.2 Admin CarePlan Manage Figma

The screenshot shows the ATG Healthcare Admin dashboard. On the left, a sidebar menu includes Dashboard, Users, Care Plans, Tasks, Messages, and Reports. The main area displays a summary: Total Care Plans (120), Pending Tasks (15), and Unread Messages (8). Below this, a section for Recent Notifications lists: Task overdue for Client A and Message from Care Navigator B. A large Analytics section is partially visible.

The screenshot shows the ATG Healthcare Admin Care Plans page. The top navigation bar includes links for Dashboard, Users, Care Plans (which is the active tab), Tasks, Messages, and Reports. A button for "Add New Care Plan" is located in the top right. The main content area displays a table of care plans:

Client Name	Care Navigator	Status	Start Date	End Date	Actions
Jane Doe	John Smith	Active	2024-01-15	2024-12-31	<button>View</button> <button>Delete</button>
Mark Taylor	Emily Davis	Completed	2023-06-01	2023-10-30	<button>View</button> <button>Delete</button>

### 3.11.3 - Communicate with Care Navigators

#### 3.11.3.1 - Description

Admins can send and receive messages to/from care navigators via the system's secure messaging feature.

#### 3.11.3.2 - Inputs

- Message content.
- Recipient ID (care navigator).

#### 3.11.3.3 - Outputs

- Success: Message is sent..
- Failure: Error message if the message cannot be sent.

#### 3.11.3.4 - Preconditions

- Both the admin and care navigator must be registered users in the system.

#### 3.11.3.5 - Postconditions

- The message is delivered to the recipient.

#### 3.11.3.6 - Actors

- Administrator
- Care Navigator

#### 3.11.3.7 - Constraints

- Messages must be encrypted during transmission.

### 3.11.3.8 - Figma

Figure 3.11.3 Admin Messages Figma

The screenshot shows the 'Messages' section of the ATG Healthcare Admin application. The top navigation bar includes links for Dashboard, Users, Care Plans, Tasks, Messages (which is the active tab), and Reports. A user profile icon for 'Admin' is also present. The main content area has a header 'Messages' with a 'Compose Message' button. Below is a table with columns: Sender, Recipient, Message Preview, Status, Timestamp, and Actions. Two messages are listed:

Sender	Recipient	Message Preview	Status	Timestamp	Actions
Jane Doe	John Smith	Can you clarify...	Unread	2024-02-01 10:45 AM	<button>View</button> <button>Delete</button>
Emily Davis	Mark Taylor	Thank you for the update...	Read	2024-01-30 3:15 PM	<button>View</button> <button>Delete</button>

### 3.11.4 - Generate Reports

#### 3.11.4.1 - Description

The admin can generate reports based on system data, such as user activity, and system usage.

#### 3.11.4.2 - Inputs

- Report type.

#### 3.11.4.3 - Outputs

- Success: Report is generated and available for download or viewing.
- Failure: Error message if report generation fails.

#### 3.11.4.5 - Postconditions

- The report is generated and stored for access.

#### 3.11.4.6 - Actors

- Administrator
- System

#### 3.11.4.7 - Constraints

- Reports must comply with privacy and data security regulations.

#### 3.11.4.8 - Figma

Figure 3.11.4 Reports Figma

The screenshot shows the ATG Healthcare Admin application interface. At the top, there is a navigation bar with links for Dashboard, Users, Case Plans, Tasks, Messages, Reports (which is highlighted in green), and Admin. Below the navigation bar, there is a header titled "Reports". On the right side of the header, there is a button labeled "Export All Reports". The main content area displays three summary cards: "Total Care Plans" (120), "Completed Tasks" (450), and "Unread Messages" (15). Below these cards is a table listing two reports. The table has columns for Report Name, Generated By, Date, and Actions. The first row contains "Care Plan Overview", "Admin", "2024-02-01", and two buttons: "View" and "Download". The second row contains "Task Completion Summary", "Admin", "2024-01-25", and two buttons: "View" and "Download".

Report Name	Generated By	Date	Actions
Care Plan Overview	Admin	2024-02-01	<button>View</button> <button>Download</button>
Task Completion Summary	Admin	2024-01-25	<button>View</button> <button>Download</button>

Figure 3.11.5 Admin Tasks Figma

The screenshot shows the 'Tasks' section of the ATG Healthcare Admin interface. At the top, there is a navigation bar with links for Dashboard, Users, Care Plans, Tasks (which is the active tab), Messages, Reports, and a user profile icon labeled 'Admin'. Below the navigation bar is a button bar with 'Add New Task' and 'All Tasks'. The main area is titled 'Tasks' and contains a table with two rows of task data.

Task	Assigned To	Due Date	Status	Actions
Check blood pressure	John Smith	2024-01-25	Pending	<button>Mark as Completed</button> <button>Delete</button>
Physical therapy session	Emily Davis	2024-01-20	Completed	<button>Delete</button>

Figure 3.11.6 Admin Settings Figma

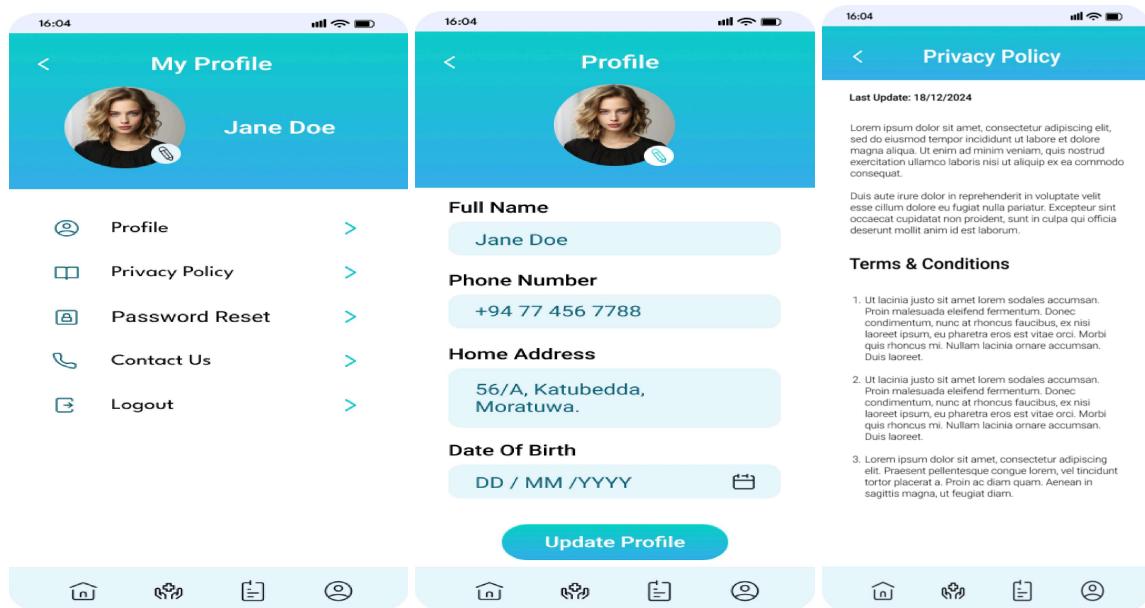
The screenshot shows the 'Update Profile' page of the ATG Healthcare Admin interface. At the top, there is a navigation bar with links for Dashboard, Users, Care Plans, Tasks, Messages, Reports, and a user profile icon labeled 'Admin'. The main area is titled 'Update Profile' and contains form fields for updating the profile. The fields include 'Profile Photo' (with a 'Choose File' button and 'No file chosen' message), 'Name' (with the value 'Admin'), and 'Email' (with the value 'admin@example.com'). At the bottom of the form is a large blue 'Update Profile' button.

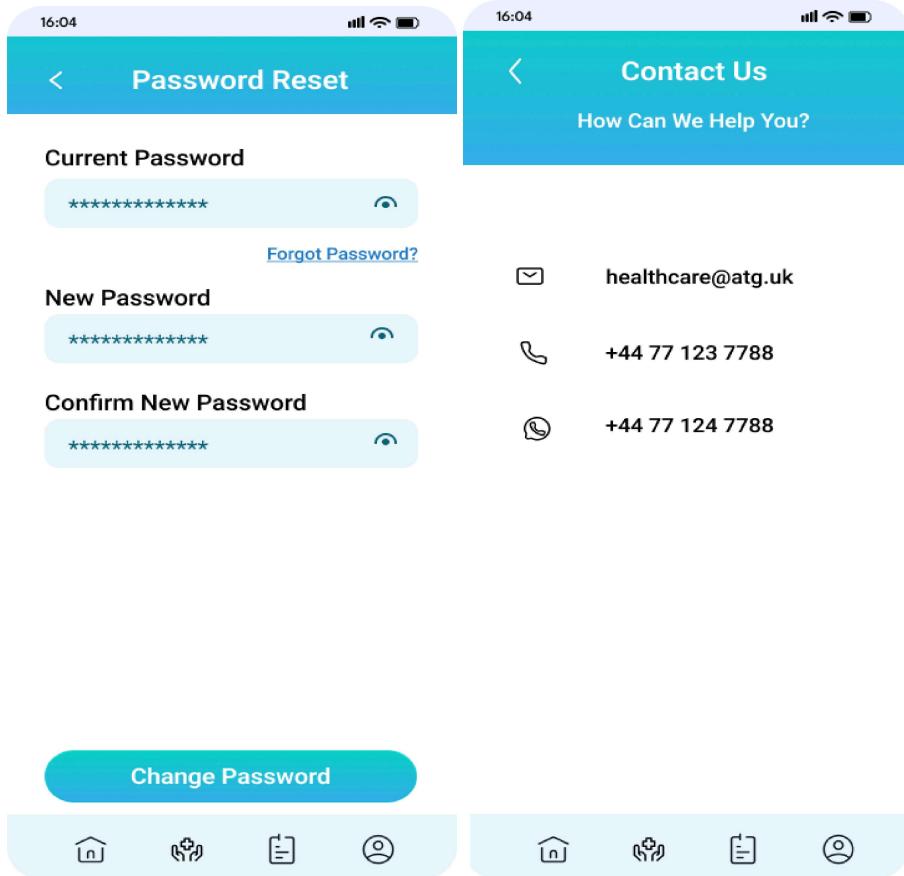
## 3.12 - Profile Page

### 3.12.1 - Description

The profile page in the mobile app serves as a centralized hub for managing user-specific settings and information. Users can update their profile details, including their profile picture, name, contact number, home address, and date of birth. Additionally, they can view the app's privacy policy, change their password, access contact information via the "Contact Us" section, and log out of their account. This page ensures a user-friendly experience, providing quick access to essential functionalities and information.

### 3.12.2 - Figma





## 4. Non-Functional Requirements

### 4.1 Performance Requirements

- The app must provide responsive performance, ensuring all primary functionalities load within 2 seconds under typical conditions.
- The user interface must be optimized for both mobile and tablet devices, ensuring smooth navigation and interaction.

### 4.2 Security Requirements

- All sensitive data, including PHI, must be encrypted during transmission.
- User Authentication:
  - Enforce strong password policies (minimum of 8 characters, including uppercase, lowercase, numeric, and special characters).
  - Session timeout must be implemented after 15 minutes of inactivity to prevent unauthorized access.
- Access to user data must be restricted based on roles (e.g., clients, admins, care navigators) using Role-Based Access Control (RBAC).

### 4.3 Reliability & Availability

- The app must provide reliable access to users, with a design focus on reducing downtime through scalable hosting.
- Daily backups of critical data must be maintained in a HIPAA-compliant cloud storage solution, ensuring recovery in the event of data loss.

### 4.4 Usability Requirements

- The user interface must be simple and intuitive, adhering to ATG Healthcare branding guidelines for consistency.

- All text, buttons, and forms must use accessible typography (e.g., **Roboto** or **Open Sans**) and maintain high contrast for readability.

## 4.5 Data Integrity

- All data inputs must be validated at the frontend and backend to prevent errors or malicious inputs.
- Sensitive data must not be stored locally on user devices unless encrypted.

## 4.6 Safety Requirements

- Critical data must be securely backed up to prevent loss.

## 4.7 Supportability

- The source code is maintained using a version control system to enable efficient updates and bug fixes.

## 4.8 Compliance Requirements

- The app complies with HIPAA standards to ensure the confidentiality and security of user data.
- All third-party services (e.g., Calendly, AWS) integrated into the app must be HIPAA-compliant and covered under Business Associate Agreements (BAAs).
- Access to PHI must be logged for auditing purposes, including timestamps and user identification.

## 4.9 Notifications

- Push notifications do not include any PHI or sensitive information.

## 5. External Interface Requirements

### 5.1 User Interfaces

- The application will provide an intuitive and responsive user interface, optimized for mobile devices.
- The interface will follow ATG Healthcare branding guidelines, ensuring consistency in design elements such as colors, typography, and icons.
- The application will be compatible with modern web browsers, including Google Chrome, Mozilla Firefox, and Safari.

### 5.2 Hardware Interfaces

- The application is designed to be lightweight and does not require high-end hardware specifications.
- Any device capable of browsing the web with a stable internet connection can run the application seamlessly.
- Devices must meet basic web-browsing hardware requirements, such as 2GB of RAM and a dual-core processor.

### 5.3 Software Interfaces

- **Frontend:** The application uses **React Native** to develop the frontend. This library allows for building responsive and mobile-friendly interfaces while maintaining code simplicity and flexibility.
- **Backend:**
  - **AWS Cognito** for user authentication and role-based access.
  - **AWS Lambda** for executing backend logic without maintaining servers.
  - **Calendly Integration:** Appointment scheduling functionality is integrated using Calendly's webview, eliminating the need for custom scheduling UI.
- **Database:** Data is securely stored in a HIPAA-compliant cloud database (e.g., AWS DynamoDB).

- **Messaging:** The system uses encrypted in-app messaging for secure communication between users and care navigators.

## 5.4 Communication Interfaces

- **Protocols:**
  - The application uses **HTTPS** for all data transfers, ensuring secure communication over the internet.
  - **TLS 1.2+** is used to encrypt data in transit.
- **Webhooks and APIs:**
  - Calendly webhooks are used to capture appointment details after scheduling.
  - External APIs for third-party integrations must comply with HIPAA standards.
- **Notifications:** Push notifications are delivered via secure channels and do not include any sensitive user data.