**Test Report Document**

CareConnect

University of Maryland Global Campus

SWEN 670 - Software Engineering Capstone

Dr. Mir Assadullah

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**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 08/03/2025 | 1.0 | Initial Release | CareConnect Team |
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# 1.0 Executive Summary

CareConnect is a cross‑platform healthcare application designed to enhance communication and coordination between caregivers and patients. It combines a Flutter‑based mobile and web interface with a microservices backend and offers features such as user onboarding, role‑based dashboards, care‑plan and task management, gamification elements, secure messaging, community support, health data logging, AI‑powered recommendations, wearable integrations and subscription billing. The backend architecture follows a stateless microservices model with scale‑to‑zero capabilities, meaning services spin up on demand and tear down when idle, allowing the system to be highly scalable and cost‑efficient. The platform is built to meet stringent HIPAA compliance standards while delivering real‑time insights and personalized care.

The primary objective of testing was to verify that CareConnect meets its functional, non‑functional and regulatory requirements. Functional testing focused on modules including authentication and onboarding, dashboard navigation, user and role management, scheduling and notifications, health data tracking, AI integration, secure communication and media, device and third‑party integrations and billing/subscriptions. Non‑functional testing evaluated performance under typical and peak loads, assessed security and privacy controls, and validated usability and accessibility. Out‑of‑scope features—such as advanced analytics and additional language support—were excluded from this release.

Testing employed a combination of manual and automated methods. Unit and integration tests were developed using appropriate frameworks (for example, JUnit for backend services and Flutter test for frontend widgets). System‑level and user‑acceptance tests were executed to ensure end‑to‑end functionality across the mobile and web clients. Performance testing measured response times and resource utilization; security testing assessed encryption, access controls and data integrity. Usability sessions with representative caregivers and patients provided feedback on navigation, accessibility and overall experience. Testing took place in environments replicating production conditions, using Android and iOS simulators, modern web browsers, and the stateless microservices backend connected to a secure database.

Overall, testing indicates that CareConnect’s core features operate as intended and that the application satisfies its major requirements. Functionality such as secure registration, personalized dashboards, task scheduling, health data entry and viewing, secure messaging and subscription management performed reliably across supported devices. Performance and security benchmarks were largely met, demonstrating readiness for real‑world use. A small number of defects were identified—most relating to the AI recommendation engine and minor user‑interface inconsistencies—and these are being addressed in the next development iteration.

In conclusion, CareConnect demonstrates strong readiness for deployment. The testing process confirms that the application offers a comprehensive and secure platform for caregivers and patients, with only minor refinements needed before a wider release. Future actions will include resolving outstanding defects, conducting a final regression cycle, and continuing to enhance performance and security as new features are added.

# 2.0 Introduction

## 2.1 Purpose

The purpose of this Test Report is to provide a comprehensive record of the testing activities performed on the CareConnect application. It serves to demonstrate that the application meets its specified requirements and quality objectives as defined in the project documentation. This template will guide the documentation of test results, findings, and recommendations once testing is executed.

## 2.2 Scope

This report covers functional and non‑functional testing for the initial release of CareConnect. Functional tests will target areas such as user onboarding, role‑based dashboards, task and schedule management, health data logging, AI recommendations, secure messaging, social feed interactions, device integrations and subscription billing. Non‑functional tests will include performance under load, security compliance, and usability. Items outside the scope of this release should be clearly documented in subsequent versions.

## 2.3 Project Documents

The following documents provide the basis for testing and should be consulted when drafting and executing test cases:

* Technical Design Document (TDD)
* Software Test Plan (STP)
* Software Requirements Specification (SRS)
* Project Plan Document
* Previous Cohorts Test Reports

**Table 1**

*CareConnect Documentation Table*

|  |  |  |
| --- | --- | --- |
| **Document** | **Version** | **Date** |
| Project Plan | 1.0 | 05/31/2025 |
| Software Requirements Specification | 1.0 | 05/31/2025 |
| Technical Design Document | 1.0 | 06/14/2025 |
| Software Test Plan | 1.0 | 06/14/2025 |
| Programmer’s Guide | 1.0 | 07/26/2025 |
| Deployment & Operations Guide | 1.0 | 07/26/2025 |
| User Guide | 1.0 | 08/03/2025 |
| Test Report | 1.0 | 08/03/2025 |

## 2.4 References

MemoryMinder (2025, April 1). *MemoryMinder Test Report* (Version 1.0) [Project documentation]. University of Maryland Global Campus.

# 3.0 Testing

## 3.1 Test Tools & Environment

Testing should be performed using appropriate tools and environments. The following list describes the typical setup used for CareConnect. Adapt and expand this list as needed:

* Development devices: Android emulator, iOS simulator and modern web browsers
* Backend environment: Java‑based microservices (e.g., Spring Boot) connected to a relational database; configuration managed via environment variables or parameter store
* Testing frameworks: JUnit for backend unit and integration tests, Flutter/Dart test package for front‑end unit tests, API testing tools (e.g., Postman) and end‑to‑end testing tools (e.g., Selenium)
* Continuous integration pipeline: Automated build and test execution (e.g., GitHub Actions or similar)
* Monitoring and performance tools: Logging and metrics collection platforms to observe system behavior under test

## 3.2 Testing Approach

The testing approach encompasses various levels and types of testing. The following categories should guide test case creation and execution:

* Unit testing – verifying individual components in isolation
* Integration testing – ensuring interactions between components and services work as expected
* System testing – validating end‑to‑end functionality across the entire application
* User Acceptance Testing (UAT) – involving representative users to confirm the application meets their needs
* Performance testing – measuring response times and resource usage under expected and peak loads
* Security testing – assessing compliance with HIPAA and other data privacy regulations, including penetration testing and vulnerability scanning
* Usability testing – evaluating user interface intuitiveness and navigation
* Regression testing – re‑running critical tests after code changes to detect regressions

## 3.3 Pass/Fail Criteria

The Pass/Fail criteria for each test case should be clearly defined before execution. The following definitions provide guidance:

* *Pass* – The actual result matches the expected result without any deviations.
* *Fail* – The actual result does not match the expected result, indicating a deviation from the requirement.
* *Blocked* – The test could not be executed due to pre‑requisite failure or environment issues.
* *Not Executed* – The test case has not been executed in this cycle.

# 4.0 Requirements Traceability Matrix

The Requirements Traceability Matrix (RTM) maps each requirement to its corresponding test case(s). These functional requirements are derived from the SRS document, and will be used to ensure comprehensive coverage of all functional requirements:

**Table 2**

*Requirements Traceability Matrix*

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirement ID** | **Requirement Description** | **Test Case ID(s)** | **Status** |
| REQ-3.1.1 | Welcome screen appears on first launch | TC-1.1 | Pass |
| REQ-3.1.2 | Email input validation on registration | TC-1.5 | Pass |
| REQ-3.1.4–3.1.5 | Register using Google SSO | TC-1.4 | Pass |
| REQ-3.1.6 | SMS OTP verification during registration | TC-1.3 | Pass |
| REQ-3.1.7 | Successful OTP login creates user account | TC-1.3 | Pass |
| REQ-3.1.9 | Login succeeds with correct credentials | TC-1.2, TC-1.6 | Pass |
| REQ-3.1.10 | Confirmation sent via email/SMS | TC-1.2, TC-1.3, TC-1.4 | Pass |
| REQ-3.2.1 | Invalid login returns error | TC-1.7 | Pass |
| REQ-3.2.2 | Login with Google SSO | TC-1.8 | Pass |
| REQ-3.2.3 | Session is created and persisted | TC-1.6, TC-1.8 | Pass |
| REQ-3.2.6–3.2.7 | Logout and token/session clearing | TC-1.9 | Pass |
| REQ-5.1.4.6.1 | Email confirmation of password change | TC-9.1 (step 8) | Pass |
| REQ-5.1.4.6.2 | Prevent reuse of old password | TC-9.1 (step 5) | Pass |
| REQ-5.1.4.6.3 | Require matching password confirmation | TC-9.1 (step 6) | Pass |
| REQ-5.1.4.6.4 | Allow multiple password resets without limit | TC-9.1 (step 10) | Pass |
| REQ-5.4.1–5.4.5 | Dashboard: load, edit/add/archive patient, navigation | TC-2.1 – TC-2.7 | Mixed |
| REQ-5.3.1.1–5.3.5.3 | Caregiver/patient profiles, multi-user linking | TC-3.1 – TC-3.6 | Mixed |

# 5.0 Test Results

The following section encompasses all the test suites and their test cases performed to ensure requirements adherence, and their pass or fail status.

## 5.0.1 Authentication and Onboarding Test Suite

**Scope**: Complete user authentication, registration, and onboarding workflows  
**Total Test Cases**: 9  
**Requirements Coverage**: REQ-3.1.1 - REQ-3.2.8

|  |  |
| --- | --- |
| **Prerequisites for this test:**  Fresh app installation (no user logged in)  Internet connectivity  Test email/password credentials  Mobile device ready to receive SMS  Google account available for SSO | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS 18 |
| **Priority:** High |
| **Requirements validated:** FR-3.1.1, FR-3.1.2, FR-3.1.4–3.1.7, FR-3.1.9–3.1.10, FR-3.2.1–FR-3.2.8 | |
| **TEST EXECUTOR: Torie Bias** | |
| **TEST SCRIPT STEPS/RESULTS** | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** |
| **TC-1.1: Welcome Screen Display and Navigation** | | | | |  |
| 1. | Install CareConnect application on target device | Welcome screen displays only on first launch | Correct screen displayed | PASS |  |
| **TC-1.2: User Registration – Email and Password** | | | | |  |
| 1. | Launch the app. On the welcome screen, tap Register. | Registration screen appears with fields for email and password. | Correct screen displayed | PASS |  |
| 2. | Enter a valid email and a strong password; tap Submit. | Account is created; user sees a confirmation or is taken to dashboard. The app sends a confirmation email/SMS (per FR-3.1.10). | Correct screen displayed | PASS |  |
| 3. | Close and relaunch the app; attempt to log in with the new credentials. | Login succeeds immediately using the created account (per FR-3.1.9). | Correct screen displayed | PASS |  |
| **TC-1.3: User Registration - SMS OTP** | | | | |  |
| 1. | Launch the app; tap Register, then choose Register with OTP option. | OTP registration screen opens, prompting for phone number. | Correct screen displayed | PASS |  |
| 2. | Enter a valid mobile number and tap Send OTP. | An SMS OTP is sent to the number; OTP input field appears (per FR-3.1.6). | Correct screen displayed | PASS |  |
| 3. | Enter the received OTP code and submit. | Account is created; user sees confirmation or dashboard. | Correct screen displayed | PASS |  |
| 4. | Attempt to log in with the associated email/phone and password (or OTP). | Login succeeds; new account is active (per FR-3.1.7 and FR-3.1.10). | Correct screen displayed | PASS |  |
| **TC-1.4: User Registration – Google SSO** | | | | |  |
| 1. | From the welcome or register screen, tap Register with Google. | Google OAuth flow starts. | Correct screen displayed | PASS |  |
| 2. | Authenticate using a valid Google account. | User is returned to the app, and account is created (per FR-3.1.4–3.1.5). | Correct screen displayed | PASS |  |
| 3. | Verify the user lands on the appropriate dashboard/home screen. | The app shows the user’s dashboard; a confirmation email/SMS is sent if required (per FR-3.1.10). | Correct screen displayed | PASS |  |
| **TC-1.5: User Registration – Invalid Email Format** | | | | |  |
| 1. | Launch the app; tap Register. | Registration screen appears. | Correct screen displayed | PASS |  |
| 2. | Enter an invalid email (e.g. “user@domain”, missing “.com”) and a password; tap Submit. | The app blocks submission and displays an error about invalid email format (per FR-3.1.2). | Correct screen displayed | PASS |  |
| 3. | Correct the email and submit it again. | Registration then succeeds as in Test Case 1 (account is created and user proceeds). | Correct screen displayed | PASS |  |
| **TC-1.6: Login/Logout Flows – Email and Password Login** | | | | |  |
| 1. | Launch the app; on the login screen enter a valid email and password; tap Login. | User is authenticated (session created per FR-3.2.3). The app navigates to the user’s dashboard. | Correct screen displayed | PASS |  |
| 2. | Close and reopen the app (or switch tabs); ensure the session is persisted (if allowed by idle timeout). | The user remains logged in without re-entering credentials (per FR-3.2.3). | Correct screen displayed | PASS |  |
| **TC-1.7: Login/Logout Flows – Login w/ Invalid Credentials** | | | | |  |
| 1. | Launch the app; enter an unregistered email or wrong password; tap Login. | Authentication fails. An error message appears (e.g. “Invalid credentials”). No navigation to dashboard (session is not created, per FR-3.2.1). | Correct screen displayed | PASS |  |
| 2. | Correct the credentials and tap Login. | Login succeeds and navigates to dashboard. | Correct screen displayed | PASS |  |
| **TC-1.8: Login/Logout Flows – Login w/ Google SSO** | | | | |  |
| 1. | On the login screen, tap Login with Google. | Google OAuth flow starts. | Correct screen displayed | PASS |  |
| 2. | Authenticate using a valid Google account. | User is returned to the app, and a session is created (per FR-3.2.2 and FR-3.2.3). | Correct screen displayed | PASS |  |
| 3. | Verify the user lands on the dashboard screen. | Dashboard is shown and user can use the app normally. | Correct screen displayed | PASS |  |
| **TC-1.9: Login/Logout Flows – Logout** | | | | |  |
| 1. | While logged in, tap the Logout button/menu. | User is logged out immediately; session data and tokens are cleared (per FR-3.2.6). | Correct screen displayed | PASS |  |
| 2. | Attempt to navigate back or access a protected screen. | The app redirects to the login screen (per FR-3.2.7). No access to previous sessions. | Correct screen displayed | PASS |  |

## 5.0.2 Dashboard and Navigation Test Suite

**Scope**: displays accurate patient data, allows interaction (view, edit, archive), support adding new patients; Main menu consists actionable navigation patient management lists.

**Total Test Cases:** 7

**Requirements Coverage**: REQ-5.4.1-REQ-5.4.5

|  |  |
| --- | --- |
| **Prerequisites for this test:**   * Linked caregiver and patient profiles. * Functioning backend for patient * Stable internet connection. | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS 18 |
| **Priority:** High |
| **Requirements validated:** REQ-5.4.1, REQ 5.4.2, REQ 5.4.3, REQ 5.4.4. REQ 5.4.5 (SRS) | |
| **TEST EXECUTOR: Alyssa Haarding** | |
| **TEST SCRIPT STEPS/RESULTS** | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** |
| **TC-2.1: Dashboard loads upon Caregiver login** | | | | |  |
| 1. | * Launch app * Login as caregiver | * Dashboard loads displaying list of patients. * Dashboards display correct patient info. | Dashboard loads on login. | PASS |  |
| **TC-2.2 Add Patient using** | **“+”** |  |  |  | |
| 2 | * Tap the floating icon “+” button. * Fill in patient name, relationship, contact info, upload media and click submit. | * Patient input from appears. * Patient is added and appears in patient list in Dashboard. | Adding patient can be done from pressing “+” button | PASS |  |
| **TC-2.3: Edit Patient** |  |  |  | | |
| 3 | * Tap “Edit” on patient card. * Modify the fields as needed. * Tap “Save button” | * Updated patient info appears in Dashboard. | Patient information can be modified and saved. | PASS |  |
| **TC-2.4: Archive Patient** |  |  |  | | |
| 4 | Tap ‘Archive” icon and confirm the dialog. | * Archive Patient is removed from the active list. * Patient is added to the archive. | Patient was archived and removed from the patient list | PASS |  |
| **TC-2.5: Real-time update** |  |  | | | |
| 5 | * Refresh dashboard. * Or wait for update. | * Patient list updates in real-time. | Refreshed the page and patient list was updated. | PASS |  |
| **TC-2.6: Menu Items** |  |  |  |  | |
| 6 | * Displays list of Menu items (Billing and Subscription Management, Schedule Management, Tracking & Monitoring, Notification Setting, Telehealth Bridge, Health Care Notes, SOS Notification). | * Caregiver is able to navigate around the menu lists. | Menu items are shown when clicking on common drawer | PASS |  |
| **TC-2.7: Display Daily Care Tasks** | | | | | |
| 1. | Display daily care tasks. User logs in and navigates to dashboard. | Dashboard loads with today’s task list. | Today’s tasks returns 404 response. | FAIL | Today’s tasks returns 404 response. |

## 5.0.3 User and Role Management Test Suite

Scope: All aspects of user and role management including caregiver profile, patient profile, multi-caregiver support, profile linking, and access control & permissions.

**Total Test Cases**: 7  
**Requirements Coverage**: REQ-5.3.1.1- REQ-5.3.5.3

|  |  |
| --- | --- |
| **Prerequisites for this test:**   * Caregiver logged in * Patient logged in * Functioning backend for caregiver * Functioning backend for patient * Stable internet connection. | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS 18 |
| **Priority:** High |
| **Requirements validated:** REQ-5.3.1.1, REQ-5.3.1.2, REQ-5.3.1.3, REQ-5.3.1.4, REQ-5.3.2.1, REQ-5.3.2.2, REQ-5.3.2.3, REQ-5.3.2.4, REQ-5.3.2.5, REQ-5.3.2.6, REQ-5.3.3.1, REQ-5.3.3.2, REQ-5.3.4.1, REQ-5.3.4.2, REQ-5.3.5.1, REQ-5.3.5.2, REQ-5.3.5.3 | |
| **TEXT EXECUTOR: Alyssa Harding** | |
| **TEST SCRIPT STEPS/RESULTS** | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** |
| **TC-3.1: Caregiver Profile information updated** | | | | |  |
|  | * Open Caregiver Dashboard * Open My Profile * Update profile information * Press “Save” | * Information is updated in the database * Dashboard information reflects changes to profile information | New information is not saved after editing the profile. | FAIL | New information is not saved after editing the profile. |
| **TC-3.2: Patient Profile information updated** | | | | |  |
| 2. | * Patient Profile information updated * Open My Profile * Update profile information * Press “Save” | * Patient Profile information updated * Patient Profile information updated | New information is not saved after editing the profile. | FAIL | New information is not saved after editing the profile. |
| **TC-3.3: Allow multiple Caregivers to link to a Patient** | | | | |  |
| 3. | * *Caregiver 1* opens Caregiver Dashboard * *Caregiver 1* presses “+” to open Add New Patient form * *Caregiver 1* links to patient * *Caregiver 2* opens Caregiver Dashboard * *Caregiver 2* presses “+” to open Add New Patient form * *Caregiver 2* links to patient | * Patient appears on *Caregiver 1*’s Caregiver Dashboard * Patient appears on *Caregiver 2*’s Caregiver Dashboard * Both Caregivers appear on patient’s Patient Dashboard | Email was sent | PASS |  |
| **TC-3.4: Allow Profile Linking between Caregiver and Patient** | | | | |  |
| 4. | * The caregiver opens the Caregiver Dashboard * The caregiver presses “+” to open the Add New Patient form * The caregiver fills in the patient’s information in the form and presses “Submit” | * The caregiver shall have access to all of the patient’s records. * The patient appears on the caregiver’s Caregiver Dashboard * The caregiver appears on the patient’s Patient Dashboard | Caregiver can view patient information after adding the first patient. | PASS |  |
| **TC-3.5: All caregiver features and linked patient information are shown to caregiver** | | | | |  |
| 6. | * The caregiver opens the Caregiver Dashboard | * The caregiver is shown a list of all linked patients * The caregiver has access to all linked patient records * The caregiver has access controls to all caregiver functionalities. | Caregiver has access to all patient records and functionalities. | PASS |  |
| **TC-3.6: All patient features are shown to patient** | | | | |  |
| 7. | * The patient opens the Patient Dashboard | * The patient is shown a list of all linked caregivers * The patient has access controls to all patient functionalities. | All patient features are shown to the patient. | PASS |  |

## 5.0.4 Tasks and Pre-defined Care Templates Test Suite

**Scope**: Assign custom and pre-defined tasks to patients.  
**Total Test Cases**: 4  
**Requirements Coverage**: REQ-5.4.1.1 - 5.4.2.5

|  |  |
| --- | --- |
| **Prerequisites for this test:**  Fresh app installation (user logged in)  Internet connectivity  Test email/password credentials  Mobile device ready to receive SMS | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS 18 |
| **Priority:** High |
| **Requirements validated:** REQ-5.4.1.1 - 5.4.2.5 | |
| **TEST EXECUTOR: Alex Vecchioni** | |
| **TEST SCRIPT STEPS/RESULTS** | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** |
| **TC-4.1 Caregiver can assign custom task to a patient** | | | | |  |
| 1. | Create a new patient. | New patient is created. | New patient is created. | PASS |  |
| 2. | Navigate to the Tasks section of the new patient. | The Tasks section can be viewed from the patient dashboard and is empty. | Tasks section is shown on the patient dashboard and is empty. | PASS |  |
| 3. | Caregiver selects ‘Add Task’ button | Assign Task Menu is shown, containing ‘Custom Task’ and task templates. | Assign Task Menu is shown, containing ‘Custom Task’ and task templates. | PASS |  |
| 4. | Caregiver selects ‘Custom Task’ | The ‘Add Custom Task’ form is displayed with empty fields. | The ‘Add Custom Task’ form is displayed with empty fields. | PASS |  |
| 5. | Caregiver enters task details and selects ‘Save’ | The new task is displayed under the Tasks section. | The new task is displayed under the Tasks section. | PASS |  |
| **TC-4.2 Caregiver can assign task from template to a patient** | | | | |  |
| 1. | Create a new patient. | New patient is created. | New patient is created. | PASS |  |
| 2. | Navigate to the Tasks section of the new patient. | The Tasks section can be viewed from the patient dashboard and is empty. | Tasks section is shown on the patient dashboard and is empty. | PASS |  |
| 3. | Caregiver selects ‘Add Task’ button | Assign Task Menu is shown, containing ‘Custom Task’ and task templates. | Assign Task Menu is shown, containing ‘Custom Task’ and task templates. | PASS |  |
| 4. | Caregiver selects ‘Sleep’ | The ‘Add Task’ form is displayed with pre-filled fields. | The ‘Add Custom Task’ form is displayed with pre-filled fields. | FAIL | The form name is incorrect. |
| 5. | Caregiver reviews task details and selects ‘Save’ | The new task is displayed under the Tasks section. | The new task is displayed under the Tasks section. | PASS |  |
| **TC-4.3 Caregiver can edit a task assigned to a patient** | | | | |  |
| 1. | Caregiver assigns a task to a patient | The new task is displayed under the Tasks section. | The new task is displayed under the Tasks section. | PASS |  |
| 2. | Caregiver selects ‘Edit’ for newly created task. | The ‘Add Task’ form is displayed with pre-filled fields for the selected task. | The ‘Add Task’ form is displayed with pre-filled fields for the selected task. | PASS |  |
| 3. | Caregiver edits a field and selects ‘Save’ | The edited task is displayed under the Tasks section. | The edited task is displayed under the Tasks section. | PASS |  |
| 4. | Caregiver selects the edited task. | The task details are displayed reflecting the changes made. | The task details are displayed reflecting the changes made. | PASS |  |
| **TC-4.4 Caregiver can edit a task assigned to a patient** | | | | |  |
| 1. | Caregiver assigns a task to a patient | The new task is displayed under the Tasks section. | The new task is displayed under the Tasks section. | PASS |  |
| 2. | Caregiver selects ‘Delete Task’ for newly created task. | The ‘Delete Task’ form is displayed asking for confirmation to delete the task. | The ‘Delete Task’ form is displayed asking for confirmation to delete the task. | PASS |  |
| 3. | Caregiver selects ‘Delete’ | The selected task is no longer displayed under the Tasks section. | The selected task is no longer displayed under the Tasks section. | PASS |  |

## 5.0.4 Health Data Tracking Test Suite

**Scope**: Track patient symptoms in CareConnect application  
**Total Test Cases**: 2  
**Requirements Coverage**: REQ-5.6.1.1 - 5.6.14.8

|  |  |
| --- | --- |
| **Prerequisites for this test:**  Fresh app installation (user logged in)  Internet connectivity  Test email/password credentials  Mobile device ready to receive SMS | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS 18 |
| **Priority:** High |
| **Requirements validated:** REQ-5.6.1.1 - 5.6.14.8 | |
| **TEST EXECUTOR: Alyssa Harding** | |
| **TEST SCRIPT STEPS/RESULTS** | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** |
| **TC-4.1 Patient can submit mood entry** | | | | |  |
| 1. | Create a new patient. | New patient is created. | New patient is created. | PASS |  |
| 2. | Navigate to the symptom section. | Mood entry can be viewed from the dashboard | Mood and pain questions are shown on patient dashboard. | PASS |  |
| 3. | Patient enters mood and pain level. | Mood and pain level are recorded into patient health data. | Patient enters mood and pain and the data is recorded. | PASS |  |
| **TC-4.2 View Symptom Graph** | | | | |  |
| 1. | Select symptom graph. | Line chart shows historical data, supports filtering, and tooltips. | Analytics dashboard shows symptoms on graphs. | PASS |  |

## 5.0.5 AI Integration Test Suite

**Scope**: AI Integrations in CareConnect application  
**Total Test Cases**: 2  
**Requirements Coverage**: REQ-5.7.1.1 - REQ-5.7.2.8

|  |  |
| --- | --- |
| **Prerequisites for this test:**  Fresh app installation (user logged in)  Internet connectivity  Test email/password credentials  Mobile device ready to receive SMS  AI Integration Complete | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS 18 |
| **Priority:** High |
| **Requirements validated:** REQ-5.7.1.1 - REQ-5.7.2.8 | |
| **TEST EXECUTOR: Alyssa Harding** | |
| **TEST SCRIPT STEPS/RESULTS** | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** |
| **TC-5.1 Caregiver Submits AI Question via Text** | | | | |  |
| 1. | Caregiver submits a question from an uploaded file | AI responds based on the information provided in the upload. | AI answered based on the uploaded file | PASS |  |
| **TC-5.2 Submit Clinical Question in AI Feature (e.g., "Should I adjust medication?")** | | | | |  |
| 1. | Caregiver submits a question needing medical judgment. | * System flags the question. * Displays message: “Please consult a licensed medical professional.” | Question asking for medical judgement was asked and AI responded with, “Please consult a licensed medical professional.” | PASS |  |

## 5.0.6 Communication and Media Test Suite

**Scope**: In-App Messaging, Audio and Video Calling, Emergency SOS Mode, Virtual Check-in Rounds, Media Uploads, Voice-Activated Commands, and Telehealth Bridge  
**Total Test Cases**: 8  
**Requirements Coverage**: REQ-5.8.1.3.1–5.8.1.3.5, REQ-5.8.2.3.1–5.8.2.3.6

|  |  |
| --- | --- |
| **Prerequisites for this test:**  Two registered users (one caregiver, one patient) linked as contacts  Both users have internet, microphone and camera access enabled  Both users are signed in on two devices  Both users have an active internet connection | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS 18 |
| **Priority:** High |
| **Requirements validated:** REQ-5.8.1.3.1–5.8.1.3.5, REQ-5.8.2.3.1–5.8.2.3.6 | |
| **TEST EXECUTOR: Alyssa Harding** | |
| **TEST SCRIPT STEPS/RESULTS** | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** |
| **TC-6.1: In-App Messaging - Send and Receive Text Message** | | | | |  |
| 1. | On User A’s device, open the conversation with User B (or start a new chat). | Conversation screen is displayed. | Message screen loads. | PASS |  |
| 2. | In the message input field, type a message (e.g. “Hello”) and tap Send. | Message appears immediately in User A’s chat window (with current timestamp). | Message is received and can be viewed. | PASS |  |
| 3. | On User B’s device, confirm receipt of the new message in the same conversation. | User B sees “Hello” appear in real-time with timestamp (per REQ-5.8.1.3.3–3.4). | Message is viewed in real-time. | PASS |  |
| **TC-6.2: In-App Messaging - Conversation List Updates** | | | | |  |
| 1. | On User A’s device, send a new message to User B (as above). | New message is sent. | New message is sent. | PASS |  |
| 2. | Navigate back to the inbox/chat list view. | A conversation entry for User B shows the latest message snippet and timestamp (confirm stored message, per REQ-5.8.1.3.4–3.5). | New message with timestamp is shown. | PASS |  |
| 3. | On User B’s device, close and reopen the chat. | The previously sent message still appears in the conversation (persisted storage). | New message with timestamp is shown. | PASS |  |
| **TC-6.3 In-App Messaging - Message Persistence After Restart** | | | | |  |
| 1. | On User A’s device, send a message to User B. | Message is delivered to User B. | Message is delivered. | PASS |  |
| 2. | Close the app completely on both devices, then reopen and log in again. | Conversation history including the sent message is still present on both sides. | Message is still present. | PASS |  |
| **TC-6.4 Audio and Video Calling – Initiate and Connect Audio Call** | | | | | |
| 1. | On User A’s device (e.g. patient), open User B’s (caregiver) profile or chat and tap the Audio Call icon. | An outgoing audio call is placed; User B’s device shows an incoming call alert. | Can tap ‘Call’ button, but call does not go through. | FAIL | Can tap ‘Call’ button, but call does not go through. |
| 2. | On User B’s device, tap Accept on the call alert. | The audio call connects; both users can hear each other (per REQ-5.8.2.3.1). | Unable to test. | FAIL | Unable to test. |
| 3. | Verify that an End Call button is visible on both devices. | Users can end the call by tapping it. | Unable to test. | FAIL | Unable to test. |
| **TC-6.5 Audio and Video Calling – Initiate and Connect Video Call** | | | | | |
| 1. | On User A’s device, open User B’s profile/chat and tap the Video Call icon. | An outgoing video call is placed; User B’s device shows an incoming video call alert. | Can tap ‘Call’ button, but call does not go through. | FAIL | Can tap ‘Call’ button, but call does not go through. |
| 2. | On User B’s device, tap Accept on the call alert. | The video call connects; both users see each other’s video feed (per REQ-5.8.2.3.1). | Unable to test. |  | Unable to test. |
| 3. | During the call, on one device tap the Mute icon and the Disable Video icon. | Audio is muted on that device, and the video stream stops; UI indicates the mute/video-off state (per REQ-5.8.2.3.5). | Unable to test. |  | Unable to test. |
| **TC-6.6 - Emergency SOS – Patient sees and taps Emergency SOS button** | | | | |  |
| 1. | Patient logs in and views the dashboard. | SOS button is visible and tappable. | Emergency SOS button is visible and tappable. | PASS |  |
| **TC-6.7 - Emergency SOS – Patient sends an Emergency SOS alert** | | | | |  |
| 1. | Following success of test case 8.8, patient taps SOS button | Emergency alert confirmation notification is visible. | Emergency alert attempts to send but does not send. | FAIL | Emergency alert attempts to send but does not send due to notification connection error. |
| **TC-6.8 - Emergency SOS – Caregiver receives Emergency SOS alert** | | | | |  |
| 1. | Following success of test case 8.9, a patient sends an emergency SOS alert. | Caregiver receives Emergency SOS alert pop up on their screen. | Unable to test due to failed result in previous test. | BLOCKED |  |

## 5.0.7 Device and Third-Party Integration Test Suite

**Scope**: Wearable devices, smart home integration, and external service connectivity  
**Total Test Cases**: 6  
**Requirements Coverage**: REQ-5.6.1.2.1, REQ-5.6.1.2.2, REQ-5.6.1.2.3, REQ-5.6.1.2.4,REQ**-5.6.1.2.5,** REQ-5.9.1.2.6, REQ-5.9.1.2.7, REQ-5.9.1.2.8, REQ-5.9.2.2.1, REQ-5.9.2.2.2, REQ-5.9.2.2.3, REQ-5.9.2.2.4, REQ-5.9.2.2.5, REQ-5.9.3.2.6, REQ-5.9.3.2.7, REQ-5.9.3.2.1, REQ-5.9.3.2.2, REQ-5.9.3.2.3, REQ-5.9.3.2.4, REQ-5.9.3.2.5, REQ-5.9.3.2.6, REQ-5.9.3.2.7

|  |  |
| --- | --- |
| **Prerequisites for this test:**  Valid Fitbit account and device  Valid Apple Health account  Valid Google Health Connect account  Stable internet connectivity  No current devices added | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS/Android |
| **Priority:** High |
| **Requirements validated:** REQ-5.6.1.2.1, REQ-5.6.1.2.2, REQ-5.6.1.2.3, REQ-5.6.1.2.4,REQ**-5.6.1.2.5,** REQ-5.9.1.2.6, REQ-5.9.1.2.7, REQ-5.9.1.2.8, REQ-5.9.2.2.1, REQ-5.9.2.2.2, REQ-5.9.2.2.3, REQ-5.9.2.2.4, REQ-5.9.2.2.5, REQ-5.9.3.2.6, REQ-5.9.3.2.7, REQ-5.9.3.2.1, REQ-5.9.3.2.2, REQ-5.9.3.2.3, REQ-5.9.3.2.4, REQ-5.9.3.2.5, REQ-5.9.3.2.6, REQ-5.9.3.2.7 | |
| **TEST EXECUTOR: Juan Gaucin** | |
| **TEST SCRIPT STEPS/RESULTS** 3 Tests passed, 1 test was not completed (9.2) , 1 test partially complete | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** |
| **TC-7.1: Fitbit Integration** | | | | |  |
| 1. | Access wearables option from menu in the patient dashboar | Wearable integration displays “Add new device” button. | Correct screen displayed | PASS |  |
| 2. | Select "Add new device" option | App displays Fitbit options | Correct screen displayed | PASS |  |
| 3. | User selects fitbit option | Fitbit authentication page displays | Correct authentication page displayed | PASS |  |
| 4. | Access is granted | Connection successful appears on the wearable screen | Correc page displays | PASS |  |
| 5. | Select “Got to Dashboar” button | Redirected back to main wearables dashboard to see connected device | New fitibit device shows on connected list | PASS |  |
| 6. | Verify metrics were pulled | Fitbit card shows current metrics retrieved from Fitbit | Correct metrics shown | PASS |  |
| **TC-7.2: Apple Health Integration** | | | | |  |
| 1. | On iOS device, access wearable settings | "Connect Apple Health" option visible |  | BLOCKED |  |
| 2. | Tap "Connect Apple Health" | iOS permission dialog appears for HealthKit |  | BLOCKED |  |
| 3. | Toggle ON permissions (heart rate, steps, sleep data) | Permissions granted |  | BLOCKED |  |
| 4. | Tap "Allow" to confirm | Returns to app with "Apple Health Connected" status |  | BLOCKED |  |
| 5. | Verify data appears in dashboard | Apple Health shows as "Connected" with last sync timestamp |  | BLOCKED |  |
| **TC-7.3: Google Health Connect Integration** | | | | |  |
| 1. | On Android device, access wearable settings | Wearable integration displays “Add new device” button. | Correct screen displays | PASS |  |
| 2. | Select "Add new device" option | Google Health option displays | Correct screen displays | PASS |  |
| 3. | Select Google Health option | Permissions screens comes up | Correct screen displays | PASS |  |
| 4. | Complete authorization | Google Health shows as "Connected" with a back to dashboard option | Correct screen displays | PASS |  |
| 5. | Select “Go to Dashboard” button | Google health shows connected and metrics pulled are displayed | Correct screen displayed | PASS |  |
| **TC-7.4: Medication Management –Scan code** | | | | |  |
| 1. | Navigate to Medication Management | Add Medication button visible | Correct Screen displayed | PASS |  |
| 2. | Tap "Scan NDC Barcode" | Camera opens with barcode scanner overlay | Camer opens | PASS |  |
| 3. | Scan test NDC code | |Barcode recognized, processing message appears | No viable bar code | BLOCKED |  |
| 4. | Wait for OpenFDA API response | Medication name auto-populates | Unable to test | BLOCKED |  |
| 5. | Verify auto-filled fields | Manufacturer, strength, and form fields filled | Unable to test | BLOCKED |  |
| 6. | Add dosage frequency | Custom fields accept input | Unable to test | BLOCKED |  |
| 7. | Save medication | Medication added to list | Unable to test | BLOCKED |  |
| **TC-7.5: Medication Management – Manual Code Entry** | | | | | |
| 1. | Navigate to Medication Management | Add Medication button visible | Correct Screen displayed | PASS |  |
| 2. | Tap "Enter NDC code" | Pop up display for manual entry | Pop up appears | PASS |  |
| 3. | Enter code 50580-937 | OpenFDA API returns information for medication Acetaminophen | Correct medication is returned | PASS |  |
| 4. | Select “Add medication” | Medication shows on medication list | Medication successfully added | PASS |  |
| **TC-7.6: Medication Management – Manual Entry** | | | | | |
| 1. | Navigate to Medication Management | Add Medication buttons visible | Correct Screen displayed | PASS |  |
| 2. | Tap "Add Medication Manually" | Pop up display for manual entry | Pop up appears | PASS |  |
| 3. | Enter code medication information | Information is listed as is entered | Information is preserved | PASS |  |
| 4. | Select “Add medication” | Medication shows on medication list | Medication successfully added | PASS |  |

## 5.0.8 Billing and Subscription Test Suite

**Scope**: Complete billing and subscription management for CareConnect application  
**Total Test Cases**: 3  
**Requirements Coverage**: FR-B1-FR-B4

|  |  |
| --- | --- |
| **Prerequisites for this test:**   * Fresh app installation (no user logged in) * Internet connectivity * Test email/password credentials * Mobile device ready to receive SMS * Google account available for SSO * Stripe integration | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS 18 |
| **Priority:** High |
| **Requirements validated:** FR-B1-FR-B4 | |
| **TEST EXECUTOR: Alyssa Harding** | |
| **TEST SCRIPT STEPS/RESULTS** | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** |
| **TC-8.1: Display Plan Catalog During Signup** | | | | |  |
| 1. | Open the signup page. | Signup page loads. | Signup page loads | PASS |  |
| 2. | View available subscription plans. | * Two plans are displayed: * Standard: $20/patient/month * Premium: $30/patient/month * Pricing reflects latest backend configuration. | Available subscriptions are shown  Standard and Premium plans are shown | PASS |  |
| **TC-8.2 Activate Subscription on Successful Payment** | | | | |  |
| 1. | Select a subscription plan. | Subscription plan is selected in UI | Subscription can be selected | PASS |  |
| 2. | Enter valid credit card or PayPal info. | Information appears on screen as it is filled out. | Test credit card payment was given | PASS |  |
| 3. | Submit payment. | * Payment is processed via Stripe. * New account is created with ACTIVE status in billing\_subscriptions. * No trial period is shown or triggered. | Payment was processed via strip and account was created. | PASS |  |
| **TC-8.3 Secure Tokenization of Payment Details** | | | | |  |
| 1. | Enter card details and tap "Pay". | Payment is processed successfully. | Payment was processed | PASS |  |
| 2. | Inspect UI behavior and back-end logs. | * UI shows loading spinner (≤ 500 ms). * Stripe Elements tokenizes payment. * Only token ID is posted to the server. * Backend does not store raw card data. * Backend responds in < 2 seconds. | No card data was saved in the back end. Stripe handled the payment. | PASS |  |

## 5.0.9User Password Reset & Recovery

**Scope**: Reset user password and help with account recovery  
**Total Test Cases**: 1  
**Requirements Coverage**: REQ-5.1.4.6.1 to REQ-5.1.4.6.4

|  |  |
| --- | --- |
| **Prerequisites for this test:**   * Fresh app installation (no user logged in) * Internet connectivity * Test email/password credentials * Mobile device ready to receive SMS * Google account available for SSO | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS 18 |
| **Priority:** High |
| **Requirements validated:** REQ-5.1.4.6.1 to REQ-5.1.4.6.4 | |
| **TEST EXECUTOR: Torie Bias** | |
| **TEST SCRIPT STEPS/RESULTS** | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** |
| **TC-9.1: Password Reset & Account Recovery** | | | | |  |
| 1. | On login screen, click “Forgot Password/Account Recovery” | Navigates to account recovery page | Correct screen displayed | PASS |  |
| 2. | Enter registered email and click “Next” | Proceeds to security question screen | Correct screen displayed | PASS |  |
| 3. | Answer security questions correctly, click “Submit” | Navigates to DOB and address input page | Correct screen displayed | PASS |  |
| 4. | Input correct date of birth and address | Navigates to password creation screen | Correct screen displayed | PASS |  |
| 5. | Enter a **new password** (same as the previous password), confirm and click “Submit” | System displays error: "New password must be different from the old password" *(REQ-5.1.4.6.2)* | Correct screen displayed | PASS |  |
| 6 | Enter a **new valid password**, confirm with **non-matching entry**, click “Submit” | System displays error: "Passwords do not match" *(REQ-5.1.4.6.3)* | Correct screen displayed | PASS |  |
| 7. | Enter a valid and unique new password, confirm correctly, click “Submit” | The display screen will confirm a succesful password. | Correct screen displayed | PASS |  |
| 8. | Check registered email inbox | Email received confirming password change *(REQ-5.1.4.6.1)* | Correct screen displayed | PASS |  |
| 9. | Log in using the new password | Login successful | Correct screen displayed | PASS |  |
| 10. | Attempt to change password again via the same process | Password change allowed again without limits *(REQ-5.1.4.6.4)* | Correct screen displayed | PASS |  |

## 5.0.10 Gamification Module Test Suite

**Scope:** This suite ensures that the gamification module properly awards points for task completion, displays total points, unlocks badges at milestones and shows celebratory messages or animations after earning points.

**Total Test Cases:** 4.

**Requirements Coverage:** REQ‑5.10.1.1 through REQ‑5.10.1.3 and applicable UI/UX requirements.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Prerequisites for this test:**   * Patient and caregiver accounts exist with daily tasks assigned. * Gamification module (points, badges, messages) is enabled in the backend. * Internet connectivity is available. | | | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS 18 | | | |
| **Priority:** High | | | |
| **Requirements validated:** REQ‑5.10.1.1, REQ‑5.10.1.2, REQ‑5.10.1.3 | | | | | | |
| **TEST EXECUTOR: Dat Truong** | | | | | | |
| **TEST SCRIPT STEPS/RESULTS** | | | | | | |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** | |
| **TC-10.1: Award Points** | | | | | |  | |
| 1. | *Award points upon task completion.* User completes a daily task. | Points are awarded and visible on the profile. | | Points are awarded and display correctly | Pass |  | |
| **TC-10.2: View Total Accumulated Points** | | | | | | | |
| 1. | *View total accumulated points.* User opens profile. | Total points are displayed in dashboard. | | Total points are displayed correctly | Pass |  | |
| **TC-10.3: Unlock Badge** | | | | | | | |
| 1. | *Unlock badge after reaching milestone.* User completes enough tasks to reach a milestone. | |  | | --- | | Badge appears in achievements panel. | |  | | | Badge appears correctly in Achievement’s tab | Pass |  | |
| **TC-10.4: Display Celebratory Message** | | | | | | | |
| 1. | *Display celebratory message after earning points.* User completes a task that awards points. | UI displays animation or congratulatory message. | | UI displays confetti animation when user reach a new level | Pass |  | |

## 5.0.11 Social Networking Test Suite

**Scope:** This suite checks that users can view community posts, submit comments, react to posts, view caregiver activity feeds and that privacy settings for patient posts are correctly enforced.

**Total Test Cases:** 5.

**Requirements Coverage:** REQ‑5.11.1.1 through REQ‑5.11.1.5.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Prerequisites for this test:**   * User has an active account and is logged in. * Social networking feature is enabled; community forum contains posts. * Internet connectivity is available. | | | **Software Versions:**  Application: CareConnect  Software Version: 1.0  Operating System: iOS 18 | | | |
| **Priority:** High | | | |
| **Requirements validated:** REQ‑5.11.1.1, REQ‑5.11.1.2, REQ‑5.11.1.3, REQ‑5.11.1.4, REQ‑5.11.1.5 | | | | | | |
| **TEST EXECUTOR: Dat Truong** | | | | | | |
| **TEST SCRIPT STEPS/RESULTS** | | | | | | |
| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | | **ACTUAL RESULTS** | **PASS/FAIL** | **Defects Found** | |
| **TC-11.1: View Community Forum Posts** | | | | | |  | |
| 1. | *View friend's posts.* User navigates to social tab. | A list of posts appears with username and timestamp. | | Screen display correctly | Pass |  | |
| **TC-11.2: Submit New Comment** | | | | | | | |
| 1. | *Submit a new comment.* User enters text and posts it. | Comment becomes visible under the corresponding topic. | | Unable to create a new post | Fail | Component username broken down to two smaller first name and last name components. | |
| **TC-11.3: Accept to Another User’s Friend Request** | | | | | | | |
| 1. | *Connect with other users by sending friend request* | Display friend request and option to accept or reject friend’s request | | Friend request display correctly | Pass |  | |
| **TC-11.4: View friend’s message and reply baack** | | | | | | | |
| 1. | *View friend message.* Send a message back. | Real time message display and send a reply back. | | Message display correctly | Pass |  | |
| **TC-11.5: Privacy Check for Patient Posts** | | | | | | | |
| 1. | *Privacy check for friend post. Non-friend will not be able to see post.* | Only friend can see each other’s post | | Post display correctly | Pass |  | |

# 6.0 Test Assessment & Metrics

The following table gives an overview of the overall assessment and results from the CareConnect test suite.

**Table 3**

*Test Assessment for CareConnect*

| **Metric** | **Value** |
| --- | --- |
| Number of test cases executed | **58** |
| Number of passes | **49** |
| Number of fails | **7** |
| Number of blocks | **2** |
| Overall pass rate | **84%** |

# 7.0 Defects & Issues

Defects and issues may be classified by level of severity. A table of severity level and description can be viewed below:

**Table 4**

*Severity Level Table*

| **Severity Level** | **Description** | **Example** |
| --- | --- | --- |
| Critical | Severe issues that block core application functionality and require immediate resolution. | App crashes immediately upon launch. |
| High | Major feature failures that significantly impact the user experience or prevent key tasks. | Caregivers are unable to add patients. |
| Medium | Moderate issues affecting non-essential features, typically with available workarounds. | File categories do not match uploaded files. |
| Low | Minor cosmetic or UI-related issues that do not affect core functionality. | Button misalignment on certain screens |

*Note*. Table created with reference from previous 2025 SWEN 670 project (MemoryMinder, 2025).

The table below provides a high-level overview of defects and issues encountered during the development lifecycle and testing phases of CareConnect:

**Table 5**

*Defects Table*

| **Defect ID** | **Description** | **Severity** | **Test Case ID** | **Status** |
| --- | --- | --- | --- | --- |
| DEF‑01 | When logging into Caregiver dashboard on larger monitor, patient card gets rendered off the screen. | Low | TC-2.1 | Identified |
| DEF-02 | Caregiver profile - New information is not saved after editing the profile. | Medium | TC-3.1 | Identified |
| DEF-03 | Patient profile - New information is not saved after editing the profile. | Medium | TC-3.2 | Identified |
| DEF-04 | Emergency alert attempts to send but does not send. | High | TC-8.9 | Identified |
| DEF-05 | Audio calls - Can tap ‘Call’ button, but call does not go through. | High | TC-7.4 | Identified |
| DEF-06 | Unable to test Apple integration | High | TC-7.2 | Identified |
| DEF-07 | No viable NDC bar code to test | Medium | TC-7.4 | Identified |
| DEF-08 | Unable to create a new post | Medium | TC-11.2 | Debugging |
| DEF-09 | The form name is incorrect. | Medium | TC-4.2 | Identified |

*Note*. Defects table collected during the round of end-to-end testing.

# 8.0 Conclusion & Suggested Actions

* Overall assessment of application quality:
  + While various high and medium-level defects were identified during the test run, major functionality had passing results.
* Outstanding critical defects:
  + No critical defects were identified during this test run.
* Readiness for release or pilot deployment:
  + Major functionality is ready for current release with ongoing efforts in debugging and identifying root causes of errors for fixes during deployment iterations.
* Recommended next steps:
  + The following items are the current recommendations for future work of CareConnect:
    - Establish alternative measures for features with issues
    - Caching or pre-fetching file references when opening Ask AI feature
    - Improving testing strategies

# 9.0 Appendix

## 9.1 Acronym List

* API: Application Programming Interface. A set of rules that allows one software component to interact with another.
* AI: Artificial Intelligence. Techniques enabling software to perform tasks typically requiring human intelligence.
* HIPAA: Health Insurance Portability and Accountability Act. U.S. legislation that sets standards for protecting sensitive patient health information.
* PHI: Protected Health Information. Any individually identifiable health data regulated under HIPAA.
* RBAC: Role‑Based Access Control. A method of restricting system access based on a user’s role or permissions.
* RDS: Relational Database Service. A managed database service used to store structured application data.
* DynamoDB: A managed NoSQL database service (Amazon DynamoDB) used for scalable, high‑throughput data storage.
* TDD: Technical Design Document. A document that describes the architecture, design and major components of the system.
* STP: Software Test Plan. A document outlining the testing strategy, scope, resources and schedule for a project.
* SRS: Software Requirements Specification. A document detailing functional and non‑functional requirements for the system.
* RTM: Requirements Traceability Matrix. A table mapping each requirement to its corresponding test case(s).
* UAT: User Acceptance Testing. Validation performed by end users to ensure the software meets their needs.
* CI/CD: Continuous Integration / Continuous Deployment. A set of practices that enable frequent code integration, automated testing and automated deployment.
* AWS: Amazon Web Services. A cloud platform offering various on‑demand computing services (used to host CareConnect’s backend).
* DBMS: Database Management System. Software used to store, retrieve and manage data
* REST API: Representational State Transfer API. A web service that uses HTTP methods to perform actions on resources.
* SOS: A distress signal; in CareConnect, triggers an emergency alert to a caregiver.
* OTP: One‑Time Password. A short‑lived code used to verify a user’s identity during authentication.
* SSO: Single Sign‑On. A mechanism that allows users to authenticate once and access multiple systems or applications.
* UI / UX: User Interface / User Experience. The visual elements and overall experience of interacting with the software.
* SMS: Short Message Service. A text‑messaging service used for sending alerts or notifications.
* QR: Quick Response (code). A matrix barcode that can be scanned to trigger an action.
* DOB: Date of Birth. A standard personal identifier used during user registration.
* PD: Patient Dashboard. The area of the application where patients view tasks, notifications and health data.
* EUF: External User Functionality. Features available to end users such as patients and caregivers (e.g., messaging, logging mood).
* IUF: Internal User Functionality. Backend or administrative functions not directly exposed to end users.
* NDC: National Drug Code. A unique identifier for medications; scanning an NDC barcode allows the app to add a medication to a care plan.