**Test Plan Document**

**e-Care Clinicals Application**

*QA Test Plan*

*Version: <1.0>*

**Prepared By:**

Jinal Sapariya, Prajakta Sumbe, Akhilesh Tawde, Puneet Tanwar

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# **Document Acceptance and Sign-Off**

By signing below I acknowledge that I have read the entire contents of this document and accept the document in this form as reasonably fulfilling the goals described in the section titled Document Purpose. I further agree that this will constitute the document of record and cannot be changed without review and acknowledgement of the groups shown below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Group / Role** | **Approver Name** | **Approver Signature** | **Date Approved** |
| Group 7 | Prajakta Sumbe | Prajakta Sumbe | dj 4/20/20 |
| Group 7 | Jinal Sapariya | Jinal Sapariya | dj 4/20/20 |
| Group 7 | Akhilesh Tawde | Akhilesh Tawde | dj 4/20/20 |
| Group 7 | Puneet tanwar | Puneet Tanwar | dj 4/20/20 |

# **Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Document/Department Editor:** | | | |
| **Date** | **Revision #** | **Editor** | **Description of Change** |
| 04/18/20 | eCare\_v1 | Akhilesh Tawade | Document purpose and introduction |
| 04/19/20 | eCare\_v2 | Prajakta Sumbee | Test Environments, Roles and Responsibilities |
| 04/19/20 | eCare\_v3 | Jinal Sapariya | Assumptions, constraint, dependencies, risks, process, module, components |
| 04/19/20 | eCare\_v4 | Puneet Tanwar | Partnership Testing |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# **Glossary**

|  |  |
| --- | --- |
| **Term** | **Definition** |
| Clinical Clearance | Basic guideline provided by the hospitals which involves policies about what is required before patient gets treated |
| Spectra Labs | Laboratories who deliver comprehensive testing, analysis and reporting |
| EMR | Electronic Health Record is a systematic collection of patient health records in digital format. |
| Medicare | Medicare is a national health insurance program in the United States |
| Medicaid | This is the federal and state government program that helps with medical costs for people with limited income and resources. |
| Commercial Health Insurance | Health insurance that is provided and administered by non-government entities. |
| Claim | It is formal request by insurance holder to company for coverage |

# **Document Purpose**

A new e-Care Clinicals application is going to replace the legacy Pro-Team application. The e-Care Clinicals application has a more comprehensive functionality for the nurses to do their daily jobs better.

This document helps guide the QA team for the purpose of testing out the new e-care clinicals application by following the step by step process and getting a product overview along with the test environments, roles and responsibilities as well as various assumptions and constraints kept in mind while designing the e-care clinicals application.

# **Introduction**

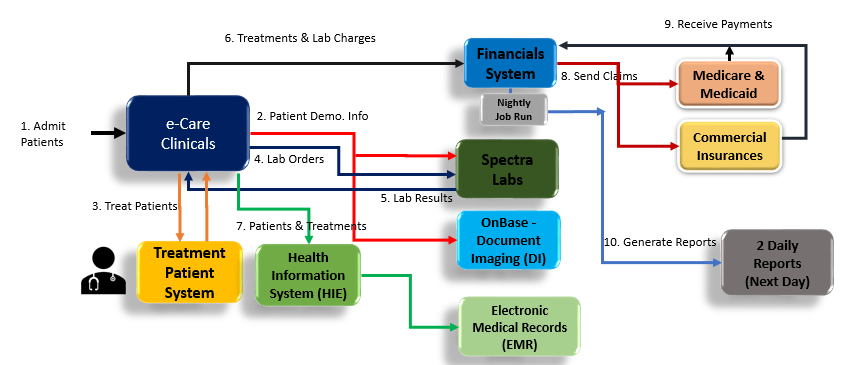
## **Test Product Overview**

It contains details of new and modified capabilities,differences between baseline and previous system, flow of the application and hardware/software requirements

The new e-care Clinicals application is a modified version of the legacy Pro-Team application. The modified capabilities include the division of the “Treatment Patient System” into two different units, that is, “Treatment Patient system” and “Health information system” which means that these two units need to be tested separately and have different functionalities. While the Treatment Patient system keeps history of existing patients and their treatments, the Health information system has information about new/existing patient’s current health situation.

The main difference in this system compared to the earlier one is the comprehensibility of the current e-care clinicals application. The distribution of tasks into different separate units ensures better testing capabilities along with the enhancing patient experience. The new application is more efficient which means that it saves both time and effort. A lot of features including “nightly job run” are now automatically done without any manual intervention.

Flow Looks Like -



Since the e-care system would work 24/7, the new e- care application is made to work with efficiency to accommodate hundreds of requests at a given time with multiple tasks operating at the same time.

Hardware Requirements:

* Intel i5 Processor
* 4GB RAM
* DVD-ROM, either embedded or detached
* 128 GB hard drive storage minimum; 256 GB or greater hard drive storage is preferred
* Screen Size: 13” or bigger with resolution of at least 1024 x 768
* Graphics Card: 512 MB minimum
* 100 MB/1 GB NIC and/or 802.11 b/g/n Wireless Network Card
* 3 year warranty (PC or Mac)
* Security Cable

Software Requirements:

* Operating system: Windows 10 (64 bit preferred but works on 32 bit as well)
* Anti-virus: Antivirus following the compliance standards namely PCI, HIPAA, GDPR and HTC. This could include McAfee or Microsoft Forefront endpoint protection
* Firewall:Microsoft Defender Firewall Required
* Encryption: Open Manage BitLocker preferred.

## **Test Planning**

## 5.2.1 Purpose

### The purpose of testing the e-care clinicals application is to identify any flaws in the system and eradicate it to make it more efficient when it is put to use by the customers. Quality assurance of this e-care system will make sure to prevent defects, ensure correctness and accuracy and maintain the level of quality in terms of providing the necessary information in the most time and effort efficient manner.

### **5.2.2** Objectives

### The objective of this QA plan is to manage risks that may arise due to any software defect or failure as well as making sure that the system works as per the BRD and FSD specified by the client. It is necessary to verify that the e-Care clinicals application works as per the needs of the client specifications and a QA plan guarantees that the system developed is doing exactly that in addition to identifying any failure that may arise in the application before handing it over to the client.

### **5.2.3** Scope

The scope of this QA Test plan is to understand all the possible test cases that are needed for the purpose of successfully testing out all the features of the application ensuring any defects/failures.

Below are the scenarios that will be covered:

* Validate the financial clearance for new and existing patient
* Verification of the demographic information is sent to DI
* Check clinical clearance for treatment
* Check for insurance type
* Lab orders are sent to Spectra and results sent back
* Verify the financial claim status and check the payment
* Check daily reports

## **Definitions**

**System and Integration Testing**: Involves the overall testing of a complete system of many subsystem components or elements

**Performance and Stress Testing:** This test is a form of deliberately intense or thorough testing used to determine the stability of a given system or entity

**User Acceptance Testing:** This test focuses on validating the business logic. It allows the end users to complete one final review of the system prior to deployment.

# **Test Environments**

## **Test Data**

* Some test data will be generated manually by respective QA according to the scenarios and test cases.
* Legacy data provided by client organizations is used as mass input data for the patient information.

## **Test Tools**

|  |  |  |
| --- | --- | --- |
| **Sr. No** | **Tool** | **Use** |
| 1 | Microsoft Excel | Test Case/Scenario Creation |
| 2 | Microsoft Word | Test Report |
| 3 | UFT | Automation Testing |
| 4 | Selenium | Automation Testing |
| 5 | HP ALM | Bug Tracking |
| 6 | JIRA | Bug Tracking |
| 7 | Jmetre | Stress Testing |

# **Roles and Responsibilities**

## **Monitoring Testing**

|  |  |  |
| --- | --- | --- |
| **Role** | **Responsibility** | **Name** |
| Project Test Leader | Leading the team to the success of the project  (Schedule test meetings for monitoring the progress) | **Medi Servattalab** |
| Test Designer | Responsible for implementing the required testing plan, identifying the appropriate tools, techniques and provide guidance in the testing process | **Akhilesh Tawde**  Prajakta Sumbe, Jinal Sapariya, Puneet tanwar |
| Test Approver | Responsible for reviewing, validating and approving any changes made in the testing process | **Prajakta Sumbe**  Jinal Sapariya, Akhilesh Tawde, Puneet tanwar |
| Tester | Executes the test scripts and establish, document and publish the test result reports ( defect status) | **Puneet tanwar**  Prajakta Sumbe, Jinal Sapariya, Akhilesh Tawde |
| Reviewer | Responsible for reviewing the reports and test schedule recovery plans | **Jinal Sapariya**  Prajakta Sumbe, Akhilesh Tawde, Puneet tanwa |

## **Entry and Exit Criteria**

Entry Criteria:

* Defined and accepted requirements
* Test Plan
* Test Data and Test Cases
* Appropriate test environment
* Readiness of test cases
* Access to required data
* QA resources with requirements knowledge

Exit Criteria:

* Critical test cases should be passed
* All high priority defects are closed
* All identified defects are closed
* execution of all test cases
* Test closure report

# **Assumptions, Constraints, Dependencies, Risks, and Limitations**

## **Assumptions**

1. We need to assume that the documents transferred between eCare Clinicals and spectra labs and OnBase Document Imaging (DI) are of the same format as expected.
2. The two reports are generated on a daily basis and they are in particular format for example reports are csv or excel format.
3. The testing team is having the basic skills to implement the test cases.
4. All the existing patient details have been successfully transferred to this new system.
5. The new system has fault tolerance and it maintains copy of the data in another database incase of system crash/power outage.
6. The system contains the basic hardware and software requirements as specified in the document.
7. All the transactions in the system do not take more than a few seconds to show the results.

## **Constraints**

Constraints are the limitations that are placed on the project.

1. According to the project timelines the testing team should work under the specified deadlines.
2. The testing team should make themselves familiar with all the testing environments that are specified in this test plan.
3. The team must work under the given scope of the project.

## **Risks**

The following risks have been identified and the appropriate action is identified to mitigate their impact on the project.

|  |  |
| --- | --- |
| Risk | Mitigation |
| Inability to complete tasks at the estimated time | The progress of individuals will be tracked on daily basis  Any issue that are hindering the completion of the tasks will be addressed  Resources will be trained to upgrade their skills set |
| Inaccurate time and effort estimation | The scheduling plan will be revised twice and also will be reviewed by the expert person |
| Insufficient resources | All project activity progress will be controlled and track according to the plan |
| Changes to the functionality may negate the tests already written and we may lose test cases already written | Export data prior to any upgrade, message as necessary and re-import after upgrade. |
| No communication in the team | Weekly meetings can be conducted, and issues and progress can be discussed |

## **Dependencie**s

1. The full working of the eCare system is dependent on the availability of the Internet connection.
2. The application quality and its performance is based on human efforts and time.
3. All the defects and functionality flaws can be checked only if the QA team has sufficient knowledge about the environments and the testing skills.
4. Minimum software and hardware dependency is the most important factor for this application to run smoothly.

# **Processes, Modules, or Components**

## **Test Planning**

The procedure followed during testing and bug discovery is explained using a flow chart as follows:

### 

# **Test Schedule**

**Major Deliverables:**

* Test Plan
* Test Cases
* Testing Reports
* Final Summary Reports

|  |  |  |  |
| --- | --- | --- | --- |
| **Task Name** | **Start** | **Finish** | **Comments** |
| **Test Planning** | 03/25/2020 | 04/10/2020 |  |
| Review Requirement documents |  |  |  |
| Created initial test estimates |  |  |  |
| Created the document of test plan |  |  |  |
| **Test Case Review** | 04/11/2020 | 05/01/2020 |  |
| Created Test Scenarios |  |  |  |
| Created initial test cases based on Scenarios |  |  |  |
| **Testing** | 04/15/2020 | 05/15/2020 |  |
| Unit Testing |  |  |  |
| System and Integration Testing |  |  |  |
| First deploy to QA test environment |  |  |  |
| Performance and Stress Testing |  |  |  |
| UAT |  |  |  |
| Alpha testing |  |  |  |
| Beta Testing |  |  |  |
| Regression Testing |  |  |  |
| **Post-Testing** | 05/28/2020 | 06/03/2020 |  |
| Regression testing after developers review the defects |  |  |  |
| **Final/ Problem Reporting** | 06/03/2020 | 06/07/2020 |  |
| Resolution of final defects and final build testing |  |  |  |

# **Expected Results**

|  |  |
| --- | --- |
| **Test Case** | **Expected Result** |
| Verification of Admitting a new Patient into eCare with the Financial Clearance set to Yes and the demographic information is sent to DI and Spectra and a new folder is created | New Patient Information and demographics are saved successfully, demographic information is sent to DI and Spectra and a new folder is created |
| Verify that new patient who is "clinically cleared" and have insurance of type medicare/medicaid is treated with Hep-Ran drug only | New patient treated with Hep-Ran drugs successfully. |
| Verify that no treatment is allowed to new patient who is "not clinically cleared" and have insurance of either type (commercial/medicare) | No treatment is provided to new patient who is "not clinically cleared" |
| Verification of transfer of all the Treatment & Lab Charges from the Clinical system to the Financial system for All NEW Patients with Commercial Insurance & Medicare/Medicaid and having "Clinical Clearance flag = Yes". | Treatment and Lab charges are transferred to the financial system. |
| Verification of the Financial system will send Claims for the Treatment and the Lab Charges for a Existing Patient to the Medicare/Medicaid and the claims are accepted and the payment is sent back to the Financial system | Claims are accepted and the payment is sent back to the Financial system. |
| Verification of both the daily admission reports and the daily treatment reports can become available the next day for all New patients who have been admitted and were treated with their Labs for the previous day. | Patients Reports and Treatments Reports are available the next day. |

# **References**

## **Standards, Plans, and Procedures**

|  |  |
| --- | --- |
| Reference Document | Location |
| <https://www.guru99.com/traceability-matrix.html>  <https://en.wikipedia.org/wiki/Functional_specification>  <https://med.uth.edu/msit/policies/minimum-hardware-and-software-requirements/>  https://reqtest.com/testing-blog/sample-test-plan/ |  |

# **Partnership Testing**

## **Additional Testing**

### Vendor Acceptance Testing

The main purpose of this testing is to make sure that the eCare application works fine as per the business requirements by the vendors who are familiar with eCare specification and requirements.

### Configuration Management

#### System Level Considerations

While developing an eCare application we had to make sure that application functionality and performance is consistent throughout its life with all its dependency and requirements .

#### Software Level Considerations

As we added new functionalities to the eCare application every time we need to make sure that we are maintaining and tracking our eCare Application.So if there any bug or error we can rollback to see what code change made the application working unexpectedly.

## **Regression Testing**

### Regression Test

Main intention behind regression testing is to make sure new builds and releases are errors and bugs free. As the new eCare Application is going to replace the legacy Pro-team Application. The eCare Application has a more comprehensive functionality for the nurses to do their daily jobs better.Thus we have to make sure with regression testing that new functionalities we are adding will not affect previous functionalities.