भारतीय गुणवत्ता परिषद्
QUALITY COUNCIL® OF INDIA
Creating an Ecosystem for Quality

राष्ट्रीय अस्पताल और स्वास्थ्यचर्या-प्रदाता प्रत्यायन बोर्ड
National Accreditation Board For Hospitals and Healthcare Providers

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Test Cases for NABH Digital Health Standard for HIS/EMR Systems

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National Accreditation Board For Hospitals and Healthcare Providers (NABH)

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FOREWORD

NABH, a constituent board of the Quality Council of India, has been at the forefront of ensuring quality and excellence in healthcare services for the past 19 years. Over the years, NABH standards have transformed healthcare delivery, raising awareness among healthcare workers, patients, and their families about their rights and responsibilities. Dedicated to the SDG-3-Target 2030 and Viksit Bharat 2047, we aim to ensure healthy lives and promote well-being for all ages, with a special focus on patient safety and empowerment.

The evolving healthcare landscape, driven by technological advancements, has made Hospital Information Systems (HIS) and Electronic Medical Records (EMR) crucial for efficient patient data management and enhanced communication among healthcare providers.

With the mission to establish an accreditation program that sets a benchmark for the progress of the healthcare industry, fostering a culture of quality and safety in healthcare, I am delighted to introduce NABH's latest initiative—the first edition of standards for HIS and EMR systems in India.

These pioneering standards are aligned with NABH core standards and the NABH Digital Health Standards for Hospitals, marking a transformative shift in digital healthcare. This alignment places NABH in a globally unique position, where a single entity oversees all three standards, developed with consistent rigour. By upholding the highest standards in digital health, we are laying the foundation for a more efficient, transparent, and patient-centered healthcare ecosystem in India."

The new standards include Objective Elements (OEs) structured to be assessed across four levels: Core, Commitment, Achievement, and Excellence- mirroring the structure of our Digital Health Standards for Hospitals. Developed by a committee of technology specialists, NABH technical experts, and leading medical practitioner, these standards cover critical clinical and administrative workflows, data security, revenue management, interoperability, and scalability.

NABH acknowledges the commendable work being done by NHA and the significant role of the ABDM platform in promoting interoperability. We also value NHA's effort in evaluating and certifying Digital Health products for ABDM interoperability and ensuring necessary security certifications (including WASA testing). Hence NABH standards for HIS/EMR systems mandate that all products must be evaluated and approved by NHA for ABDM and security requirements, prior to applying for NABH certification. This alignment strengthens the collaboration between NHA and NABH ensuring that robust Digital Health solutions get certified and used by hospitals across India.

In developing the NABH certification for HIS/EMR systems, we have also drawn inspiration from global standards in Digital Health, as well as best practices in software development and security. We have also engaged extensively with industry experts, who have made valuable contributions to these standards. We are truly excited about the potential of NABH certification for HIS/EMR systems to accelerate the adoption of Digital Health in India, by driving standardization in product requirements and making it easier for hospitals to procure high-quality HIS/EMR products.

We recognize that developing these standards is an ongoing journey, and we welcome feedback from Digital Health companies, hospitals, and other organizations to continuously refine the standards. Additionally, we are working on the testing and certification approach for HIS/EMR systems including the selection of NABH-approved software testing agencies.

As we embark on this journey, I urge all clinicians, healthcare organizations, HIS and EMR system companies, other stakeholders, and policymakers for their support in the adoption of these standards. Together, we can elevate healthcare quality, promote patient-centric care, and contribute to a healthier India where every individual benefits from cutting-edge digital health solutions.

I extend my best wishes to all products adopting these standards and applaud their commitment to quality and patient safety. Thank you for your dedication to excellence, and I look forward to seeing the positive impact of these standards on our healthcare ecosystem.

The 1st edition of NABH Digital Health Standards for HIS/ EMR Systems serves as a valuable resource for organizations committed to providing safe, effective, and patient-centered care. May this edition inspire a new era of excellence in healthcare advancing our shared goal of ensuring that every patient receives the highest standard of care.

NABH remains committed to its mission of taking Quality, Safety and Wellness to the last in the line.

Dr. Atul Mohan Kochhar
CEO, NABH

ACKNOWLEDGEMENT

I would like to express my sincere appreciation and gratitude to all the individuals and organizations who have contributed their time, knowledge, and expertise in preparing the 1st edition of NABH Standards for HIS and EMR Systems.

I would place my heartfelt thanks and deepest gratitude to Shri Jaxay Shah, Chairperson QCI, for his vision to take quality to the grassroots and permeate the idea of quality in the DNA of every citizen in every part of India.

Mr. Rizwan Koita, Chairperson NABH, has been the guiding light throughout the development of this first edition of NABH Standards for HIS and EMR Systems. I thank him for his active participation, support, and invaluable suggestions despite his busy schedule.

I sincerely thank Mr. Chakravarthy T. Kannan, Secretary General of the Quality Council of India for his guidance and continuous support in making adequate resources available for this initiative.

I extend my heartfelt thanks to all the NABH board members for their invaluable suggestions, which have greatly contributed to the enhancement of the standards and their accompanying guidebooks.

The technical committee of NABH worked relentlessly and meticulously to accommodate the best practices in HIS/EMR space, referred to innumerable academic references, and incorporated suggestions made by all the stakeholders in bringing these standards to reality.

I thank the team of PricewaterhouseCoopers Private Limited (PwC) for their contribution in developing these standards.

I extend my deepest gratitude to team of Koita Foundation for their technical inputs and unwavering commitment to achieve this milestone.

I thank all our diligent assessors, owners of the HIS/EMR system companies, and various other stakeholders who gave us extensive feedback to improve upon the standards and their exhaustive interpretation.

I express my deep appreciation to the officers at the NABH Secretariat for their tireless efforts in completing the work on time. Their dedication and teamwork have been instrumental in delivering this guidebook with such thoroughness and precision.

Dr. Atul Mohan Kochhar
CEO, NABH

CONTENTS

Introduction to HIS/EMR Standards and Objective Elements Test Cases

This document contains the test cases developed for evaluating the NABH Digital Health Standards and objectives for HIS and EMR systems. These test cases are meticulously designed to ensure that the HIS/EMR systems meet the required performance, functionality, and compliance standards. The purpose of these test cases is to provide a structured, unified, and comprehensive approach to testing, enabling NABH, HIS/EMR vendors, NABH Empanelled Testing Agencies (NESTA) to maintain a uniform standard while testing different HIS/EMR products. With the help of these test cases, the HIS/EMR vendor can assess the current gaps in their systems while doing the Self-Assessment (SAT) and accomplish the testing phase successfully.

Structure of the Test Case

Each test case is divided into four key parts to ensure thorough and systematic testing:

1. **Test Case:** This section provides a brief description of the specific feature or functionality being tested. It outlines the objective of the test.
2. **Test Validation:** This section outlines the mode of testing. An objective can be validated by self-attestation (submitting relevant certification) or by manually demonstrating the steps of the test case.
3. **Pre-requisite:** Before executing the test case, certain conditions or configurations must be in place. This section lists all the necessary prerequisites, including system settings, data requirements, and any other dependencies that must be satisfied.
4. **Steps to Follow:** This section provides a detailed, step-by-step procedure to execute the test case. Each step is carefully articulated to ensure clarity and consistency, enabling testers to accurately carry out the test.
5. **Expected Outcome:** This section describes the anticipated results upon successful execution of the test case. It serves as a benchmark against which actual outcomes are compared to determine whether the test has passed or failed.

Usage Guidelines

- **Preparation:** Ensure all prerequisites are met before starting the test.
- **Execution:** Follow the steps meticulously to avoid any discrepancies.
- **Documentation:** Record the actual outcomes and compare them with the expected outcomes.
- **Reporting:** Document any deviations, bugs, or issues encountered during testing and take necessary actions.

Test Cases for NABH Digital Health Standard for HIS/EMR Systems

By following these structured test cases, we aim to provide a robust framework for testing HIS/EMR systems, ensuring they are reliable, efficient, and secure.

When testing objective elements, it is important to note that some may have multiple test cases. Exercise caution during the testing process to ensure comprehensive coverage. Additionally, please be aware that the scoring for objective elements with multiple test cases is consolidated into a single score.

Chapter 1- Access, Assessment and Care of Patients (AAC)

AAC.1. The system manages patient registration and referral processes.

AAC.1.a: The system registers a new patient and modifies the details as and when required.

Test Case 1: Verify that the system carries out patient registration in different ways that include kiosks, websites, mobile apps, or QR codes, etc., and captures all essential details such as demographics, Aadhaar card details, insurance information, and payment preferences.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Keep the test data for registration including valid demographic details, Aadhaar card information, insurance details, and payment preferences available for use. **3.** The patient registration form clearly indicates mandatory and non-mandatory fields.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Scenario 1 **Step 1:** Navigate to the patient registration module. **Step 2:** Simulate a dummy patient registration through one of the available mechanisms such as a kiosk or website and enter essential details such as demographics (name, age, gender, address), Aadhaar card number, insurance information, and payment preferences. **Step 3:** Use the system search functionality to retrieve the dummy patient record from the system. **Step 4:** Check that the system accurately captures and records all entered details during the kiosk or website registration process, ensuring that the information is correctly saved and accessible within the patient's record. **Step 5:** Perform steps 2 to 4 for other available registration mechanisms such as kiosks, websites, ABDM Scan & Share, mobile apps, and QR codes, along with the system's built-in patient registration feature.	**1.** The system successfully allows patient registration and modification of editable field values only.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Scenario 2 **Step 1.** Navigate to the section that stores the patient registration records. **Step 2.** Select the dummy patient registration record. **Step 3.** Select the option to modify the dummy record and modify some registration details like demographic details of patients, their Aadhaar card details, insurance details, and payment preference ensuring that mandatory fields are filled accurately. **Step 4.** Submit the patient registration form and verify that the system indicates successful submission. **Step 5:** Use the system search functionality to retrieve the patient record from the system. **Step 6:** Check that the system accurately captures and records all entered details.		

AAC.1. The system manages patient registration and referral processes.

AAC.1.a: The system registers a new patient and modifies the details as and when required.

Test Case 2: Verify that the system configures mandatory and non-mandatory fields during the patient registration process.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Keep the test data for registration including valid demographic details, Aadhaar card information, insurance details, and payment preferences available for use. **3.** The patient registration form clearly indicates mandatory and non-mandatory fields.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient registration module. **Step 2.** Access the configuration settings for patient registration to view or modify the list of fields available during the registration process. **Step 3.** Verify that the system allows administrators to designate specific fields as mandatory (e.g., name, date of birth, gender, contact information) and others as non-mandatory (e.g., secondary contact, alternate phone number). **Step 4.** Configure a set of mandatory fields and save the settings. **Step 5.** Initiate a new patient registration and attempt to submit the form without filling in one or more mandatory fields. **Step 6.** Confirm that the system prevents form submission and displays an appropriate error message or alert indicating the missing mandatory fields. **Step 7.** Fill in the mandatory fields and submit the registration form to ensure that the system allows submission only when all required information is provided. **Step 8.** Repeat the registration process, this time leaving non-mandatory fields blank, and verify that the system allows the form to be submitted successfully without any errors.	**1.** The form clearly identifies the mandatory fields with visual cues. **2.** Attempting to submit the form without filling in mandatory fields throws an error message and prevents submission.	Select Yes/No

AAC.1. The system manages patient registration and referral processes.
AAC.1.a: The system registers a new patient and modifies the details as and when required.
Test Case 3: Verify that the system carries out patient registration through different mechanisms like kiosks, websites, mobile apps or QR codes etc. **(Optional)**

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Keep the applicable mechanisms for patient registration like kiosks, websites, mobile apps, or QR codes, available for use.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Start the patient registration process using available registration methods such as kiosks, websites, mobile apps, or QR codes. **Step 2.** Initiate the dummy patient registration process and navigate to the registration data entry form. **Step 3.** Enter the relevant registration details. **Step 4.** Submit the patient registration form and verify that the system indicates successful submission. **Step 5.** Navigate to the section that stores the patient registration records and verify that the system has the registration data.	**1.** The system successfully allows patient registration through multiple mechanisms like kiosks, websites, mobile apps, QR codes.	Select Yes/No

AAC.1. The system manages patient registration and referral processes..

AAC.1.b: The system verifies the patient's mobile number.

Test Case: Verify that the system verifies the patient's mobile number via OTP.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Keep all the relevant information about the dummy patient available for use. **3.** Test environment includes a mobile phone capable of receiving SMS messages.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient registration module within the HIS/EMR system. **Step 2.** Begin the patient registration process and enter the patient's mobile number in the designated field. **Step 3.** Trigger the OTP generation process by selecting the option to verify the mobile number. **Step 4.** Confirm that the system sends an OTP to the entered mobile number via SMS.	**1.** System verifies the mobile number only when the correct OTP is entered.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Enter an incorrect OTP and verify that the system displays an error message, indicating that the OTP is invalid and preventing further progress until the correct OTP is entered. **Step 6.** Enter the correct OTP received on the mobile number and verify that the system successfully completes the mobile number verification process.		

AAC.1. The system manages patient registration and referral processes.		
AAC.1.c: The system generates a unique patient identification number.		
Test Case: Verify that the system generates a unique patient identification number.		
Pre-requisite for test		**Test Validation**
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Keep all the relevant information about the dummy patient available for use.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the patient registration module. **Step 2.** Begin the patient registration process by entering all required patient details, such as name, date of birth, and contact information. **Step 3.** Complete the registration process and submit the information to the system. **Step 4.** Verify that the system generates a unique patient identifier upon successful registration and associates it with the patient's record. **Step 5.** Confirm that the generated unique patient identifier is displayed in the patient's profile and on any related documentation or confirmation screens.	**1.** The system successfully generates a unique patient identifier for each newly registered patient. 2. Unique patient identifiers are consistently unique across all hospital departments.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 6. Perform multiple patient registrations with different sets of patient details to ensure that the system generates a unique patient identifier for each patient, avoiding any duplication. **Step 7.** Log in as a laboratory technician/ manager. **Step 8.** Use system search functionality to retrieve patient records by entering the unique patient identifier. **Step 9.** Ensure that only one patient record is retrieved for the given unique identifier and it matches the dummy patient details entered for registration. **Step 10.** Repeat steps 7 to 9 for different departments like radiology, admissions, etc.		

AAC.1. The system manages patient registration and referral processes.

AAC.1.d: The system has the capability to configure the unique patient identifier as per the healthcare organization's requirements.

Test Case: Verify that the system generates unique patient identifiers of consistent format based on various parameters.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Keep all the relevant information about the dummy patient available for use. **3.** Parameters for generating unique patient identifiers are configured in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to the unique patient identifiers' configuration. **Step 2.** Check that the system provides various prefix and suffix options for configuring unique patient identifiers.	**1.** The system configures unique patient identifiers based on specified parameters.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 3. Create a relevant format for the unique patient identifier by specifying parameters like date, department, location, etc. as required. **Step 4.** Save the configuration settings for generating a unique patient identifier for the new patient. **Step 5.** Navigate to the patient registration module. **Step 6.** Initiate the dummy patient registration process by entering the required patient details, such as name, date of birth, and contact information. **Step 7.** Submit the registration form and verify that the system generates a unique patient identifier based on predefined parameters such as the patient's name, date of birth, or other specific criteria. **Step 8.** Confirm that the generated unique patient identifier follows a consistent format as defined by the hospital's standards (e.g., a specific combination of letters and numbers, length, or structure). **Step 9.** Perform multiple registrations using different sets of patient data to ensure that the system consistently generates a unique patient identifier for each patient according to the same format.		

AAC.1. The system manages patient registration and referral processes.		
AAC.1.e: The system has the capability to generate and capture ABHA number of the patient and link it to the unique patient identifier.		
Test Case: Verified by external certification.		
Pre-requisite for test		**Test Validation**
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External Certification	Confirmation of ABDM certification.	Select Yes/No

AAC.1. The system manages patient registration and referral processes.

AAC.1.f: The system checks and flags duplicate patient registrations.

Test Case: Verify that the system accurately identifies duplicate patient entries based on unique identifiers such as any unique identification, name, date of birth, and/or mobile number.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. 2. Keep a dummy patient record with unique identifiers such as Aadhaar number, patient identifier, name, date of birth, and mobile number available for use.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Scenario 1 **Step 1.** Navigate to the patient registration module. **Step 2.** Create a dummy patient entry with exactly the same details for e.g. name, date of birth, and mobile number as an existing patient record. **Step 3.** Try to save this patient entry into the system and check that the system displays a clear and informative message to the user indicating that a duplicate record has been detected, including the details of the existing record. **Step 4.** Verify that the system prevents the creation of a new record if a duplicate is detected, ensuring that only one record exists for each unique set of identifiers. **Scenario 2:** **Step 1.** Create another patient entry with slightly varying details like name, age, or address, while some entries contain identical information like contact number, patient ID, etc. **Step 2.** Check that the system accurately indicates the possibility of a probable duplicate entry based on specified unique identifiers. **Step 3.** Review the identified duplicate entries to confirm that they share identical information, indicating potential duplication.	**1.** The system accurately identifies exact as well as potential duplicate patient entries based on matching or similar details.	Select Yes/No

AAC.1. The system manages patient registration and referral processes.

AAC.1.g: The system supports patient registration in offline mode.

Test Case: Verify that the system captures data in offline mode digitally and synchronizes with the main system when it is back online.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Keep all the relevant information about the dummy patient available for use. **3.** The system is accessible and operational, both online and offline. **4.** The system is configured to support offline data capture and synchronization functionalities. **5.** Test environment includes network connectivity for testing offline and online modes.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient data entry module. **Step 2.** Simulate a loss of internet connectivity to enter offline mode by disconnecting from the network or switching to offline mode in the application. **Step 3.** Enter dummy patient data into the system while in offline mode, including details such as name, date of birth, contact information, and any other relevant medical data that is required for registration. **Step 4.** Confirm that the system allows data entry and captures all inputted information digitally while offline, storing it securely on the local device. **Step 5.** Reconnect the system to the internet or switch back to online mode. **Step 6.** Verify that the system detects the restored connectivity and initiates the synchronization process to upload the locally stored data to the main system. **Step 7.** Check that the system successfully synchronizes all offline data with the main system, ensuring that no data is lost or corrupted during the upload process. **Step 8.** Use system search functionality to retrieve dummy patient record from the system. **Step 9.** Confirm that the main system updates with the newly synchronized data, accurately reflecting the changes made while offline in the patient records.	**1.** The system stores the data captured offline securely and accurately. **2.** The system detects and switches to offline mode when network connectivity is lost. **3.** The system synchronizes the data upon restoration of online connectivity.	Select Yes/No

AAC.1. The system manages patient registration and referral processes.	
AAC.1.h: The system groups multiple visits of the patient under episodes of care.	
Test Case: Verify that the system creates an episode ID for repeat patients for a particular cause and bundles up all visits related to that cause into episodes that are linked to the unique patient identifier.	
Pre-requisite for test	**Test Validation**
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Keep dummy patient registration records with multiple visits for the same specific cause available in the system. **3.** The system is configured to support the creation of episode IDs and episode linking for repeat patients.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient visit module. **Step 2.** Register a new visit for a dummy patient and specify a cause or reason for the visit. **Step 3.** Submit the visit information and verify that the system generates an episode ID for this visit based on the specified cause. **Step 4.** Confirm that the episode ID is linked to the dummy patient's unique patient identifier and is associated with the cause of the visit. **Step 5.** Perform additional visits for the same dummy patient with the same cause (e.g., follow-up visits for a chronic condition). **Step 6.** Verify that the system identifies these subsequent visits as part of the same episode by linking them to the existing episode ID associated with the cause. **Step 7.** Check that all visits related to the specified cause are bundled under the same episode ID, including any new visits recorded after the initial visit. **Step 8.** Confirm that the episode ID and all related visit details (e.g., dates, visit notes) are correctly displayed in the dummy patient's episode history. **Step 9.** Verify that the system accurately associates the episode ID with the unique patient identifier across different modules, such as medical history, billing, and appointment scheduling.	**1.** The system successfully creates an episode ID for repeat patients presenting with a particular cause. **2.** All visits related to the cause are bundled up into episodes linked to the patient's unique identifier. **3.** Episode details accurately reflect the patient's visit history, including diagnoses, treatments, and other relevant information.	Select Yes/No

AAC.1. The system manages patient registration and referral processes.

AAC.1.i: The system links all patient medical records to respective unique patient identifiers.

Test Case: Verify that the system links all kinds of patient records, which could be generated at either pharmacy, laboratory, radiology, etc. to the unique patient identifier of the respective patient, to ensure that all their details can be fetched using the same unique patient identifier.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Keep a unique patient identifier for a dummy patient that has been previously created and available for use. **3.** Different departments such as pharmacy, laboratory, radiology, etc., are integrated into the system to generate patient records. **4.** Various test records from departments such as pharmacy, laboratory, and radiology for a dummy patient should be available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient records module. **Step 2.** Register a new patient or select an existing patient with a unique patient identifier. **Step 3.** Access the pharmacy module and create a new prescription for the patient, ensuring the prescription is linked to the patient's unique patient identifier. **Step 4.** Verify that the prescription details, including medication name, dosage, and dates, are correctly associated with the patient's unique patient identifier in the pharmacy records. **Step 5.** Access the laboratory module and order a set of diagnostic tests for the patient. **Step 6.** Verify that the test results and details are linked to the patient's unique patient identifier in the laboratory records. **Step 7.** Access the radiology module and request a series of imaging studies (e.g., X-rays, MRIs) for the patient. **Step 8.** Verify that the imaging results and reports are correctly associated with the patient's UPI in the radiology records.	**1.** All patient records generated from various departments are linked to the unique patient identifier of the respective patient.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 9. Check that all patient records, including those from pharmacy, laboratory, radiology, and any other relevant departments, are linked to the patient's unique patient identifier. **Step 10.** Perform a search using the patient's unique patient identifier to retrieve all associated records across different modules and departments. **Step 11.** Verify that the search results display comprehensive details from all linked records, including pharmacy prescriptions, laboratory test results, and radiology imaging reports.		

AAC.1. The system manages patient registration and referral processes.		
AAC.1.j: The system shares patient medical records with different facilities/ affiliates.		
Test Case: Verify that the system shares the patient's medical records across different facilities/affiliates to facilitate the continuity of care.		
Pre-requisite for test		**Test Validation**
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Keep a unique patient identifier for a dummy patient that has been previously created and available for use. **3.** Keep various dummy patient medical records available in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the section with the functionality related to sharing and accessing patient medical records across different facilities/affiliates. **Step 2.** Share a dummy patient medical record with various facilities/affiliates. **Step 3.** Log in to one of the available facilities/affiliates like a blood bank. **Step 4.** Try to access the shared patient's health record. **Step 5.** Verify that the system successfully retrieves the shared patient's health records. **Step 6.** Repeat steps 3 to 5 for various facilities/affiliates like pharmacies, laboratories, etc.	**1.** The system allows user to successfully share and access patient medical records across facilities/Affiliates.	Select Yes/No

AAC.1. The system manages patient registration and referral processes.	
AAC.1.k: The system manages patient referrals across different specialties.	
Test Case: Verify the functionality of the system for the patient referral process with other specialists or specialties.	
Pre-requisite for test	**Test Validation**
1. Healthcare provider or medical practitioner is logged in to the system using valid login credentials. **2.** Keep dummy patient records available in the system. **3.** Test environment includes simulated patient data and referral workflows.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient management module. **Step 2.** Select a dummy patient from the patient list who requires a referral to a specialist or specialty. **Step 3.** Access the referral functionality and initiate a new referral request for the selected dummy patient. **Step 4.** Choose the specialist or specialty to whom the dummy patient is being referred. **Step 5.** Verify that the system provides a list of available specialists or specialties based on criteria such as expertise, location, and availability. **Step 6.** Enter referral details, including the reason for referral, relevant medical history, any specific instructions or notes for the specialist and level of urgency. **Step 7.** Verify that the system allows attaching relevant patient records (e.g., medical history, test results) to the referral request to provide the specialist with comprehensive information. **Step 8.** Confirm that the referral request summary is displayed for review, including all entered details and attached records, and prompts for confirmation before submission. **Step 9.** Submit the referral request and check that the system sends the referral request to the selected specialist or specialty through secure channels, such as email or direct integration with their system.	**1.** The system enables patient referrals to other specialists or healthcare organizations. **2.** Referral details are submitted successfully to the selected recipient, including attached documents or notes.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 10. Log in to the system as the specialist or specialty to whom the patient is referred. **Step 11.** Navigate to the section to view the referred patient **Step 12.** View the referred patient details **Step 13.** Confirm that the receiving specialist or specialty acknowledges the referral and receives all attached patient records. **Step 14.** Check that the urgency level is properly displayed to the specialist. **(Optional)** **Step 15.** Verify that the system updates the patient's record with the referral details.		

AAC.1. The system manages patient registration and referral processes.	
AAC.1.I: The system connects with external devices and stores captured information.	
Test Case: Verify that the healthcare system integrates with various devices, such as biometric devices, scanners, printers, and barcode scanners, to capture/transmit information.	
Pre-requisite for test	**Test Validation**
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Various devices, including biometric devices, scanners, printers, and barcode scanners, are available and properly working. **3.** Applications required for these devices are pre-installed in the system. **4.** Biometric authentication is enabled and set up for the test user. **5.** Keep dummy barcode record and barcode print available for use.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionality related to administrative functions. **Step 2.** Check that the system provides integration capabilities for the different devices.	**1.** The system successfully integrates with biometric devices, scanners, printers, and barcode scanners.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 3. Check the integration and functionality of each type of device individually within the system. **a. For Biometric Device:** • Navigate to the section where biometric authentication is enabled. • Check that the system can authenticate the user using biometric data from the device. **b. For Scanner Device:** • Check the functionality of scanner to scan documents or other materials and store them in the system. **c. For Printers:** • Check that the system can send print jobs to connected printers for printing. **d. For Barcode Scanner:** • Check the capability to scan barcode information and store it in the system.	**2.** Biometric authentication accurately recognizes and authenticates users based on captured biometric data. **3.** Document scanning functionality uploads scanned documents accurately into the system. **3.** Printing functionality sends documents to the printer device and prints them without errors. **4.** Barcode scanning accurately captures and processes barcode data within the system.	

AAC.2. The system supports patient appointments and the medical practitioner schedules.	
AAC.2.a: The system creates and manages appointments.	
Test Case: Verify that the system creates, modifies, or cancels patient appointments for various types such as physical visits and teleconsultation, capturing all relevant patient information.	
Pre-requisite for test	**Test Validation**
1. Healthcare provider/patient is logged in to the system using valid login credentials. **2.** Patient appointment booking, modification, and cancellation functionalities are available within the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the appointment management module. **Step 2.** Select the option to create a new appointment. **Step 3.** Choose the appointment type: physical visit or teleconsultation. **Step 4.** Enter dummy patient details, including unique patient identifier, name, and contact information. **Step 5.** Specify appointment details, including date, time, department or specialty, and the healthcare provider. **Step 6.** For teleconsultations, provide additional details such as preferred communication method (e.g., video call, phone call) and contact information. **Step 7.** Attach any relevant documents or notes required for the appointment (e.g., referral information, medical history). **Step 8.** Confirm and save the appointment, ensuring that the system generates a unique appointment ID and provides a summary of the appointment details. **Step 9.** Verify that the appointment is accurately reflected in the patient's record and in the healthcare provider's schedule. **Step 10.** Access the appointment management module and search for the existing appointment using the appointment ID or patient information. **Step 11.** Select the appointment to be modified. **Step 12.** Make necessary changes to the appointment details, such as rescheduling the date or time, changing the appointment type, or updating patient or provider information. **Step 13.** Confirm the modifications and save the updated appointment. **Step 14.** Verify that the changes are accurately reflected in both the patient's record and the provider's schedule. **Step 15.** Access the appointment management module and locate the appointment to be canceled using the appointment ID or patient information.	**1.** The system allows patients / staff to book, modify and cancel appointments. **2.** The system updates the availability status of the appointment slots when appointments are created or canceled.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 16. Select the option to cancel the appointment. **Step 17.** Provide a reason for the cancellation, if required, and confirm the cancellation request. **Step 18.** Verify that the appointment is removed from both the patient's record and the provider's schedule.		

AAC.2. The system supports patient appointments and the medical practitioner schedules.

AAC.2.b: The system generates and sends notifications to the patients.

Test Case: Verify that the system generates and sends notifications to patients via SMS, WhatsApp, or patient portal to inform them about their appointment booking.

Pre-requisite for test	Test Validation
1. Healthcare providers or administrative staff is logged in to the system using valid login credentials. **2.** Configured notification systems for appointment booking and any appointment changes. **3.** Keep a dummy patient record with relevant details such as mobile number, email ID etc. and preferred mode of communication available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the appointment management module. **Step 2.** Initiate the process of booking an appointment for a dummy patient to trigger a notification. **Step 3.** Check that the system sends a notification to the patient about the appointment details, including the date, time, and healthcare practitioner, and also include the link in case of a teleconsultation appointment. **Step 4.** Check and confirm that the detailed information about the appointment is accurately conveyed in the notification message and confirm receipt of the notification message by the patient.	**1.** System sends notifications to patients promptly after booking an appointment via SMS, WhatsApp, or patient portal. **2.** For any change, the system sends an updated notification to the patient.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Try to make some changes to the appointment schedule and save it in the system. **Step 6.** Check that the system sends notifications to the patient through a digital communication channel with updated information.		

AAC.2. The system supports patient appointments and the medical practitioner schedules.		
AAC.2.c: The system has the capability to record time stamps.		
Test Case: Verify that the system captures time stamps accurately in both the Outpatient Department (OPD) and Inpatient Department (IPD) scenarios.		
Pre-requisite for test		**Test Validation**
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Patient management modules for both OPD and IPD are available within the system. **3.** Test environment includes simulated patient data and workflows for OPD and IPD scenarios.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Scenario 1: **Step 1.** Navigate to the section with the functionality related to managing OPD visits. **Step 2.** Simulate a dummy patient check-in at the OPD using the system. **Step 3.** Start consultation for the patient. **Step 4.** Enter any necessary tests or procedures performed during the OPD appointment and trigger patient check-out. **Step 5.** Verify that the time stamps are captured for each process and also capture the start and end times of the consultation. **Step 6.** Check that the time stamp is correctly reflected in the patient's OPD visit record.	**1.** The system accurately captures time stamps for events in both OPD and IPD scenarios.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Scenario 2: **Step 1.** Navigate to the section with the functionality related to managing IPD processes. **Step 2.** Simulate a patient admission to the IPD using the system. **Step 3.** Enter details for all procedures, tests, and medications administered during the patient's stay in the IPD and trigger patient check-out. **Step 4.** Verify that the time stamps are captured for each process. **Step 5.** Check that the time stamp is accurately reflected in the patient's IPD discharge record.	**1.** The system accurately captures time stamps for events in both OPD and IPD scenarios.	Select Yes/No

AAC.2. The system supports patient appointments and the medical practitioner schedules.	
AAC.2.d: The system captures details of appointments made through external systems.	
Test Case: Verify that the system captures appointments made through any external system and reflects them accurately within the system.	
Pre-requisite for test	**Test Validation**
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** External systems are integrated with the appointment booking functionality of the system. **3.** Test environment includes simulated dummy patient appointment data from external systems.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Scenario 1: **Step 1.** Navigate to the section with the functionalities responsible for the booking of patient appointments through external systems. **Step 2.** Initiate appointment booking through one of the external systems. **Step 3.** Enter all the relevant information of the patient and save it to the external system.	**1.** The system successfully captures appointment booking, modification/cancellation made through external systems.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 4. Check that the appointment details entered through the external system are accurately captured. **Step 5.** Check that the appointment information is reflected in the system. **Step 6.** Repeat steps 2 to 4 for other available mechanisms for appointment booking. **Step 7.** Stimulate a scenario where there is already an appointment scheduled through the internal system. **Step 8.** Try to book an appointment through an external system at the same time(slot) as the appointment booked through the internal system. **Step 9.** Check the system's capability to provide a correct response, such as displaying a message that the slot is already booked. **Scenario 2:** **Step 1.** Navigate to the section with the functionalities responsible for the modification/cancellation of patient appointments through external systems. **Step 2.** Initiate appointment modification/cancellation through one of the external systems. **Step 3.** Enter necessary notes and details and save it to the external system. **Step 4.** Verify that the appointment modification/ cancellation is captured at the external system. **Step 5.** Verify that the appointment modification/cancellation is reflected in the system. **Step 6.** Repeat steps 2 to 4 for other available mechanisms for appointment modification/cancellation visits.	**1.** The system successfully captures appointment booking, modification/cancellation made through external systems.	Select Yes/No

AAC.2. The system supports patient appointments and the medical practitioner schedules.
AAC.2.e: The system displays the available dates, times, and the profile of the medical practitioners for booking appointments by the staff.
Test Case: Verify that the system displays the available date and time along with the complete profile of the medical practitioner, including working hours, years of experience, detailed education qualifications, specialty, and additional certifications (if any), while the appointment is being booked by the staff.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Medical practitioner profiles, including working hours, qualifications, specialty, and certifications, are stored and maintained within the system. **3.** Appointment booking functionality is available and integrated with medical practitioner profiles.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the appointment booking module within the system. **Step 2.** Access the list of available medical practitioners for appointment booking. **Step 3.** Select a medical practitioner from the list. **Step 4.** Check that the system displays the available dates and times for the selected practitioner. **Step 5.** Check that the system displays details of the practitioner such as working hours, years of experience, detailed education qualifications, specialty, and additional certifications. (if any)	**1.** The system displays the calendar and comprehensive profile of the selected medical practitioner during the appointment booking process. **2.** Profile information includes working hours, years of experience, detailed education qualifications, specialty, and additional certifications. (if any)	Select Yes/No

AAC.2. The system supports patient appointments and the medical practitioner schedules.
AAC.2.f: The patients are able to digitally book an appointment with a specific medical practitioner based on the dates and time displayed on the system.
Test Case: Verify that the system allows patients to book appointments with specific medical practitioners.

Pre-requisite for test	Test Validation
1. Medical practitioners are registered in the system. **2.** Patients are registered in the system. **3.** Appointment slots are available for booking.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Log into the system as a patient through the patient portal or hospital website. **Step 2.** Navigate to the appointment booking module. **Step 3.** Select a specific medical practitioner for whom an appointment needs to be booked. **Step 4.** Verify and confirm that the system displays information about the selected medical practitioner, including their specialty, skills, expertise, and qualifications. **Step 5.** Book an appointment with the selected medical practitioner for a specific health issue or consultation for a dummy patient. **Step 6.** Access the patient's appointment schedule. **Step 7.** Confirm that the newly booked appointment is accurately reflected in the patient's records.	**1.** The system books the appointment with the specific medical practitioner successfully. **2.** The booked appointment is reflected in the system's scheduling module.	Select Yes/No

AAC.2. The system supports patient appointments and the medical practitioner schedules.
AAC.2.g: The system display and print the medical practitioner's schedule.
Test Case: Verify that the system displays and prints the schedule of all medical practitioners upon request.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff with appropriate permissions to access and print schedules is logged into the system. **2.** Medical practitioners are registered and have assigned schedules. **3.** Working printers should be available and integrated with the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the schedule management module within the system. **Step 2.** Access the functionality to display schedules for one or multiple medical practitioners. **Step 3.** Select the option to view or print the schedule for one or multiple medical practitioners. **Step 4.** Verify that the system displays a comprehensive list of medical practitioners along with their schedules. **Step 5.** Ensure that the displayed schedules include relevant details such as working hours, appointment slots, and any scheduled breaks. **Step 6.** Select the print option or button to generate a physical copy of the schedule. **Step 7.** Verify that the system initiates the printing process and a print preview is displayed. **Step 8.** Ensure that the printed schedule accurately reflects the displayed information, including all relevant details. **Step 9.** Check for any formatting issues or discrepancies between the displayed and printed schedules. **Step 10.** Verify that the printout includes all necessary details and is formatted for easy readability.	**1.** The schedule of the selected medical practitioner is accurately displayed on the system. **2.** A printed version of the schedule is generated and matches the displayed schedule.	Select Yes/No

AAC.2. The system supports patient appointments and the medical practitioner schedules.
AAC.2.h: The system has the capability of queue management for various healthcare services.
Test Case: Verify the queue management capability of the system.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** A queue management system and display board should be available and integrated into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the queue management module. **Step 2.** Check that the system can assign digital tokens or tickets to patients upon arrival to track their position in the queue to monitor and manage patient flow efficiently. **Step 3.** Simulate a scenario where multiple patients arrive and register through the queue management system. **Step 4.** Try to add patients with various visit types such as scheduled visits, walk-ins, new visits, and revisits. **(Optional)** **Step 5.** Check that each patient is assigned a digital token or ticket upon registration to track their position in the queue. **Step 6.** Confirm that the queue management system allows healthcare organization staff to monitor and control patient flow effectively including viewing the current status of the queue and managing patient wait times. **Step 7.** Try to register multiple patients through various dispensers simultaneously. **Step 8.** Check that all patient registrations in the queue management system are synchronized into the system and assign a digital token or ticket number to each patient without overlapping.	**1.** The queue management system accurately reflects the order of patients waiting for appointments. **2.** All the relevant information about the token, expected waiting time, and queue no. is displayed. **3.** All the patient registration information is synchronized.	Select Yes/No

AAC.2. The system supports patient appointments and the medical practitioner schedules.
AAC.2.i: The system displays estimated patient waiting time for various healthcare services.
Test Case: Verify that the system displays the waiting time for a patient and notifies patients about their approximate wait time through notifications or display boards.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff is logged in to the system using valid login credentials. **2.** Queue management functionality is enabled. **3.** Patient notification settings are configured.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to the managing waiting times of patients. **Step 2.** Check the feature responsible for displaying and notifying patients about the waiting time. **Step 3.** Simulate the scenario where a dummy patient arrives at the healthcare organization and registers for their appointment or joins the queue for the appointment/service. **Step 4.** Verify that the system displays the estimated waiting time to the patient upon registration or joining the queue for the appointment/service. **Step 5.** Verify that the system sends notifications to patients informing them about the estimated wait time. **Step 6.** Validate that patients receive notifications containing information about the estimated wait time. **Step 7.** Trigger the completion/cancellation of an appointment of the previous patient and confirm that the displayed waiting time is updated in real-time based on the current queue status and appointment schedules. **Step 8.** Verify that the display boards in the waiting area show accurate and updated waiting times for patients. **Step 9.** Simulate scenarios where waiting times change due to delays or changes in the queue and verify that the system updates notifications and display boards accordingly.	**1.** The system accurately displays waiting time for patients based on their position in the queue. **2.** Patients receive notifications containing information about their estimated wait time.	Select Yes/No

AAC.3. The system handles laboratory test orders and samples.	
AAC.3.a: The system configures clinical and administrative workflow for laboratory management.	
Test Case: Verify that the system supports clinical and administrative workflows for laboratory management functionalities including setup of masters, configuration of SOPs and rules, the establishment of information flow between treating medical practitioners, laboratory, and billing departments, ensuring the accuracy of reports, and generation of report templates for different specialties.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff members such as medical practitioners, laboratory personnel, billing personnel, etc. with appropriate permissions are logged into their accounts. 2. Laboratory management module is enabled and configured. 3. Masters, SOPs, rules, and other relevant entities are set up in the system and available for testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to laboratory management. **Step 2.** Check the features available for setting up and configuring laboratory management workflows in the system, including: **a. Setup of masters:** Verify the system's capability to set up master data including necessary fields. **b. Configuration of SOPs and rules:** Validate the system's ability to configure standard operating procedures (SOPs) and rules governing laboratory processes, including sample collection, testing, and result reporting. **c. Information flow setup:** Confirm that the system enables the establishment of information flow between treating medical practitioners, laboratory personnel, and the billing department to ensure seamless coordination and communication. **d. Report template generation:** Ensure that the system allows for the generation of report templates tailored to different specialties such as microbiology, biochemistry, etc. **Step 3.** Configure laboratory management workflows, including setting up masters, SOPs, rules, and information flow as per requirements.	1. Laboratory management functionalities, including setup of masters, configuration of SOPs and rules, establishment of information flow, accuracy of reports, and generation of report templates for different specialties, are successfully verified.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 4. Generate report templates for different specialties using the system's capabilities. **Step 5.** Check that the generated report template is accurate.		

AAC.3. The system handles laboratory test orders and samples.		
AAC.3.b: The system automatically assigns a specimen number for every sample collected / received and links it to the patient's unique identifier.		
Test Case: Verify that the system generates specimen numbers for samples collected/ received and links them to their patient's unique identifier.		
Pre-requisite for test		**Test Validation**
1. Healthcare staff members with appropriate permissions are logged in to their accounts. **2.** The laboratory testing module is enabled and configured. **3.** A sample record (blood, urine, etc.) should be available for testing purposes. **4.** Labeling mechanisms, such as barcodes or label printing, are integrated within the system and configured for use.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the specimen management module. **Step 2.** Access the functionality to create a new specimen entry for collected or received samples. **Step 3.** Collect or receive a sample and enter the relevant details into the system, such as sample type, collection date, and time. **Step 4.** Verify that the system automatically generates a unique specimen number for each sample collected or received. **Step 5.** Ensure that the generated specimen number is displayed prominently on the specimen entry screen. **Step 6.** Link the specimen number to the patient's unique identifier by selecting or entering the patient's details in the system. **Step 7.** Verify that the specimen number is correctly associated with the patient's unique identifier.	**1.** System generates and assigns unique identifier to the samples. **2.** System links unique identifier of the sample to the patient's unique identifier accurately.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 8. Access the patient's record to confirm that the specimen number is visible and linked under the patient's profile. **Step 9.** Review the specimen management system to ensure that the generated specimen numbers are unique and follow the system's numbering format.		

AAC.3. The system handles laboratory test orders and samples.		
AAC.3.c: The system tracks specimens.		
Test Case: Verify that the system tracks specimens accurately, through unique identifiers.		
Pre-requisite for test		**Test Validation**
1. Healthcare staff members with appropriate permissions are logged into their accounts. **2.** The laboratory testing module is enabled and configured. **3.** A sample record (blood, urine, etc.) already attached with the unique patient ID should be available for testing purposes.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the specimen tracking. **Step 2.** Access the functionality to create a new specimen entry for a dummy patient. **Step 3.** Collect or receive a specimen and enter relevant details, including the specimen type, collection date, and patient information. **Step 4.** Check that the system generates or assigns a unique identifier for the specimen entered into the system. **Step 5.** Check that the unique identifier is displayed prominently and associated with the specimen details. **Step 6.** Access the specimen record using the unique identifier to confirm that all associated details (e.g., collection time, test results) are correctly displayed.	**1.** The system tracks the specimen's status through unique identifiers.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 7. Simulate scenarios where specimens are moved between different locations or different stages (e.g., from the collection site to the laboratory) and verify that the unique identifier remains consistent and accurate throughout. **Step 8.** Ensure that the system provides accurate tracking information when searching or retrieving specimens based on their unique identifier. **Step 9.** Track the specimen through various stages of its lifecycle, including collection, processing, analysis, and reporting. **Step 10.** Check and confirm that the system updates the specimen status such as in process' to 'processed' etc. accurately as it progresses through each stage.		

AAC.3. The system handles laboratory test orders and samples.	
AAC.3.d: The system creates/ modifies templates for laboratory reports.	
Test Case: Verify that the system creates and modifies the laboratory report templates for different specialties such as biochemistry, microbiology, etc., allowing configurability and editability within the system.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff members with appropriate permissions are logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the report template management module. **Step 2.** Access the functionality to edit the laboratory report template. **Step 3.** Select the specialty for which the report template is to be created (e.g., biochemistry, microbiology). **Step 4.** Check that the system allows for the configuration of template fields specific to the selected specialty, including test parameters, results, and reference ranges. **Step 5.** Make some changes to the content of the report template and save it in the system.	**1.** The system successfully supports the creation and modification of reporting templates for different specialties such as biochemistry, microbiology, etc.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 6. Enter sample data into the template fields to ensure that the template correctly displays all necessary information for the chosen specialty. **Step 7.** Save the new report template and verify that it is correctly listed and accessible under the specialty category in the template management module.		

AAC.3. The system handles laboratory test orders and samples.		
AAC.3.e: The system enables sample label printing.		
Test Case: Verify that the system supports the printing of unique labels for laboratory samples collected.		
Pre-requisite for test		**Test Validation**
1. Healthcare staff members with appropriate permissions are logged into the system. **2.** Sample collection functionality is enabled and configured in the system. **3.** A working printer and barcode scanner should be available and integrated with the system. **4.** Keep a dummy patient record with laboratory tests assigned available in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Scenario 1: **Step 1.** Navigate to the specimen management or label printing module. **Step 2.** Select the dummy patient record for whom the laboratory test has been assigned. **Step 3.** Select one laboratory test ordered for the dummy patient. **Step 4.** Collect or receive a laboratory sample and enter the necessary details into the system, such as specimen type, collection date, and patient information. **Step 5.** Select the option to generate labels for printing. **Step 6.** Verify that the label is printed. **Step 7.** Verify that the label contains a unique identifier and tag it to the corresponding patient for whom the label was printed.	**1.** The system prints unique labels for samples collected which are tagged to the corresponding patient.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Scenario 2 (in case the label has a barcode): **Step 1.** Perform steps 1 to 5 from scenario 1 and then scan the barcode with a barcode scanner. **Step 2.** Verify that the label contains the barcode which is tagged to the corresponding patient for whom the label was printed.		

AAC.3. The system handles laboratory test orders and samples.		
AAC.3.f: The system appends laboratory reports.		
Test Case: Verify that the system appends the laboratory reports of various tests, with a clear audit trail maintained for any changes made.		
Pre-requisite for test		**Test Validation**
1. Healthcare provider with authorization to manage laboratory reports should be logged into the system. **2.** Keep a dummy patient's record with multiple test orders available in the system. **3.** The system is configured to maintain an audit trail for any changes made to laboratory reports.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the laboratory report management module within the system. **Step 2.** Select the dummy patient for whom multiple test orders were assigned. **Step 3.** Access an existing laboratory report for a specific test for a dummy patient. **Step 4.** Append additional information or test results to the existing report as needed. **Step 5.** Verify that the appended information is correctly added to the report and that the report content is updated accurately. **Step 6.** Confirm that the electronic signature is applied to the report and is visible in the report details. **Step 7.** Finalize the report within the system and ensure that it is marked as “finalized” or “completed.” **Step 8.** Verify that once finalized, the report is no longer editable by any users, including the pathologist who signed it.	**1.** The system appends laboratory reports, capturing all necessary details and patient information.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 6. Save the modified report and ensure that the system maintains the updated version. **Step 7.** Navigate to the audit trail section. **Step 8.** Access the audit trail for the report. **Step 9.** Verify that the audit trail includes detailed records of any changes made to the report, including the date, time, user who made the changes, and the specific modifications. **Step 10.** Check that the audit trail provides a clear and chronological record of all updates and additions made to the report.	**2.** The audit trail feature accurately records the appending of laboratory reports, including user actions, timestamps, and report details.	

AAC.3. The system handles laboratory test orders and samples.		
AAC.3.g: The system generates a non-editable final report once it is signed by the pathologist.		
Test Case: Verify that the system successfully generates finalized pathology reports signed by the pathologist and ensures that these reports are not editable after finalization.		
Pre-requisite for test		**Test Validation**
1. Healthcare provider with permission to finalize and generate laboratory reports should be logged into the system. **2.** Create a dummy patient record and a laboratory test order, for example CBC test. **3.** Keep sample test reports, for example, CBC test reports for the patient available in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the pathology report management module. **Step 2.** Access an existing pathology report that is ready for finalization. **Step 3.** Review the report to ensure that all required information, including test results and diagnostic details, is complete. **Step 4.** Verify that the system provides an option for the pathologist to sign the report electronically. **Step 5.** Have the pathologist electronically sign the report using their credentials.	**1.** The system successfully generates non-editable finalized reports only when it is signed by the pathologist.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 9. Attempt to make changes to the finalized report and ensure that the system prevents any modifications, displaying an appropriate message or restriction. **Step 10.** Access the finalized report to confirm that it is correctly labeled and stored as a finalized document.	**2.** Finalized reports are locked and not editable after the finalization process, ensuring data integrity and compliance with regulatory requirements.	Select Yes/No

AAC.3. The system handles laboratory test orders and samples.		
AAC.3.h: The system clearly marks the damaged/ rejected samples.		
Test Case: Verify that the system calls out or labels certain samples as damaged or spoiled, ensuring they are not used for further testing.		
Pre-requisite for test		**Test Validation**
1. Healthcare provider with authorization to access laboratory test management should be logged into the system. **2.** The sample management module or functionality is accessible within the system. **3.** System should have alert settings enabled for the laboratory section.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the specimen management module. **Step 2.** Access the functionality to create a new specimen entry for collected or received samples. **Step 3.** Select the dummy sample that needs to be labeled. **Step 4.** Collect or receive a sample and enter the relevant details into the system, such as sample type, collection date, and patient information. **Step 5.** Simulate scenarios where samples are damaged or spoiled (e.g., through improper handling or storage). **Step 6.** Access the sample entry or management screen and mark the affected samples as "damaged" or "spoiled." **Step 7.** Verify that the system allows for the designation of the sample status and that the status is clearly labeled as "damaged" or "spoiled."	**1.** System updates the status of sample as specified.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 8. Ensure that once a sample is marked as damaged or spoiled, it is automatically flagged or highlighted within the system's sample management interface, and check that is there any color coding available for sample status.		

AAC.3. The system handles laboratory test orders and samples.

AAC.3.i: The system displays the reference range for a test and highlights abnormal/out of range results.

Test Case: Verify that the system displays the normal range for a test and highlights abnormal/out of range results.

Pre-requisite for test	Test Validation
1. Healthcare provider with authorization to access laboratory test management should be logged into the system. **2.** Normal and abnormal ranges for tests should be defined in the system. **3.** Keep a dummy patient record available for use to whom a laboratory test order has been assigned.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with functionalities related to managing laboratory test orders. **Step 2.** Select a dummy patient record that includes test results. **Step 3.** Verify that the system displays the normal range for each test next to the corresponding result. **Step 4.** Enter or review test results that are within the normal range. **Step 5.** Confirm that the system displays these results without any special highlighting or alerts. **Step 6.** Enter or review test results that are outside the normal range. **Step 7.** Confirm that the system highlights these out-of-range results (e.g., with color, bold text, or an alert symbol). **Step 8.** Ensure that the highlighted abnormal results are easily distinguishable from the normal results.	**1.** The system displays reference ranges for laboratory tests based on specific factors such as age, sex, and health condition. **2.** The system prominently highlights abnormal test results, making them easily identifiable within the test report.	Select Yes/No

AAC.3: The system handles laboratory test orders and samples.
AAC.3.j: The system flags the incorrect tests/ reports that need to be repeated.
Test Case: Verify that the system has the capability to flag tests for which incorrect reports have been issued and require a repeat test for accurate reporting.

Pre-requisite for test	Test Validation
1. Healthcare providers with permission to generate laboratory reports should be logged into the system. **2.** The pathology report generation module or functionality is accessible within the system. **3.** Keep finalized test reports for the dummy patient available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the laboratory test ordering screen. **Step 2.** Select a dummy patient and initiate a laboratory test (e.g., blood test). **Step 3.** Enter the incorrect data for the test report in the laboratory test results entry screen. **Step 4.** Save and issue the report. **Step 5.** Observe if the system provides an option to flag the report as incorrect. **Step 6.** Select the option to flag the issued report as incorrect. **Step 7.** Confirm the reason for flagging the report (e.g., data entry error, equipment malfunction). **Step 8.** Verify that the system flags the test as requiring a repeat and initiates a repeat order for the same test. **Step 9.** Complete the process for sample collection and lab processing for the repeat test. **Step 10.** Enter the correct results for the repeat test. **Step 11.** Generate and issue the new test report. **Step 12.** Verify that the system stores both the incorrect and the corrected reports while marking the final report as accurate. **Step 13.** Access the dummy patient's test history. **Step 14.** Confirm that the flagged test and the repeat test are clearly indicated, with details of the incorrect and correct reports.	**1.** The system allows laboratory staff to flag tests for which incorrect reports were issued. **2.** The system successfully flags the test as requiring a repeat. **3.** The system supports generating a new report for the repeat test.	Select Yes/No

AAC.3. The system handles laboratory test orders and samples.
AAC.3.k: The system sends notifications to patients and medical professionals when their reports are ready.
Test Case: Verify that the digital system sends notifications to patients and medical professionals once their reports are ready, enabling easy access to their test results through SMS, email, chat application, or patient portal notifications.

Pre-requisite for test	Test Validation
1. Healthcare provider with permission to manage report notifications should be logged into the system. **2.** Keep dummy patient test reports available in the system. **3.** Patient consent has been obtained along with the preferred way of communication channel recorded in the system regarding notification. **4.** Appropriate notification service subscriptions are in place, for example, SMS package, WhatsApp API, etc.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section where test results are finalized (e.g., Report Management, Test Results). **Step 2.** Finalize a test report for a dummy patient and check it is marked as ready for review. **Step 3.** Verify that the system sends a notification to the patient regarding the availability of their report through their preferred way of communication channel. **Step 4.** Check that the patient receives a notification on their patient portal (if applicable). **Step 5.** Verify that the medical professionals involved also receive notifications about the availability of the report. **Step 6.** Ensure that the notifications provide clear instructions or links for accessing the test results. **Step 7.** Check the test results using each notification channel to ensure that the links or instructions function properly and lead to the correct report. **Step 8.** Access the patient's test history. **Step 9.** Confirm that the flagged test and the repeat test are clearly indicated, with details of the incorrect and correct reports.	**1.** The system sends notifications to patients and medical professionals regarding the availability of their reports through selected channels (email, chat application, SMS, patient portal).	Select Yes/No

AAC.3. The system handles laboratory test orders and samples.

AAC.3.I: The system allows patients to view/download their reports.

Test Case: Verify that the system allows patients to access and download their test reports, especially when notifications are sent via the patient portal, ensuring ease of access, and reducing the potential for errors in manual communication and record-keeping.

Pre-requisite for test	Test Validation
1. Healthcare provider with permission to manage report notifications should be logged into the system. **2.** Keep dummy patient test reports available in the system. **3.** Patient notification functionalities, including patient portal notifications, are properly configured and enabled within the system. **4.** Appropriate notification service subscriptions are in place, for example, SMS package, WhatsApp API, etc. **5.** A dummy patient's credentials to access the patient portal should be available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient portal section where test reports are accessible. **Step 2.** Check that the patient has received a notification indicating that their test report is available. **Step 3.** Log in to the patient portal using the dummy patient's credentials. **Step 4.** Locate the section or tab where test reports are listed. **Step 5.** Verify that the patient can view the list of available test reports, including the newly available ones. **Step 6.** Select the test report that has been recently made available. **Step 7.** Confirm that the system allows the patient to view the full test report details. **Step 8.** Check the download functionality by clicking the download option for the test report. **Step 9.** Verify that the report downloads successfully in the expected format (e.g., PDF). **Step 10.** Open the downloaded file to ensure it contains the correct and complete test report information.	**1.** The system sends a notification to the patient via digital communication channels such as patient portal, chat application, email, SMS once the report is finalized. **2.** The patient should be able to access/download the report through notification.	Select Yes/No

AAC.3. The system handles laboratory test orders and samples.
AAC.3.m: The system identifies tests that have been referred to external labs and maintains the records of the results.
Test Case: Verify that the system identifies tests referred to external labs and maintains records of the results.

Pre-requisite for test	Test Validation
1. External laboratory information and contact details are accurately recorded and accessible within the system. **2.** Keep dummy patient records to whom laboratory tests have been assigned available in the system. **3.** Keep specimen data linked to the dummy patient records available in the system. **4.** All the necessary information for the specimen that needs to be sent to the external laboratory is available such as test ID, and sample collection date, test name, etc.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Log in to the system as laboratory staff. **Step 2.** Navigate to the patient's test ordering screen. **Step 3.** Select a dummy test to be referred to an external laboratory. **Step 4.** Verify that the system provides an option to mark the test as referred to an external lab. **Step 5.** Generate a sample collection label for the selected test. **Step 6.** Verify that the label clearly indicates that the sample is for an external lab, including details like test name, patient ID, and external lab info. **Step 7.** Enter the referral lab's details, including the lab name, contact details, and expected test turnaround time. **Step 8.** Confirm that the system allows and stores this information accurately. **Step 9.** Navigate to the referred tests section in the system. **Step 10.** Verify that the system lists the test as "referred" with a status indicating the sample has been sent to the external lab.	**1.** The system accurately records all relevant details of test orders sent to external laboratories. **2.** Any activities related to the test requisitions or orders are logged accurately and comprehensively.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 11. After receiving results from the external lab, input the results into the system. **Step 12.** Verify that the test result is marked as received from an external lab and is distinguishable from internal test results. **Step 13.** Ensure the result is digitally stored in the patient's record. **Step 14.** Access the patient's test history. **Step 15.** Verify that referred tests are identifiable and distinguishable from in-house tests. **Step 16.** Ensure that all records for the referred test, including referral details and results, are accessible. **Step 17.** Verify that all actions related to the referred test (order, referral, results entry) are logged in the system's audit trail for tracking and compliance purposes.	**3.** Records of tests sent to external laboratories can be retrieved easily for reference or auditing purposes.	

AAC.3. The system handles laboratory test orders and samples.		
AAC.3.n: The system links the laboratory reports of the patients to their ABHA.		
Test Case: Verified by external certification.		
Pre-requisite for test		**Test Validation**
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External Certification	Confirmation of ABDM certification.	Select Yes/No

AAC.4. The system handles radiology test orders and images.	
AAC.4.a: The system configures clinical and administrative workflow for management of radiology department.	
Test Case: Verify that the system supports clinical and administrative workflow for radiology management functionalities, including workflow setup, configuration of controls, and generation of report templates for different radiology specialties.	
Pre-requisite for test	**Test Validation**
1. Healthcare professional or administrator with permissions to configure radiology management should be logged into the system. **2.** Radiology department information, including specialty details and user roles, is accurately recorded and accessible within the system. **3.** Report templates for different radiology specialties are defined and configured within the system. **4.** Masters, SOPs, rules, and other relevant entities are set up in the system and available for testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the radiology management section of the system. **Step 2.** Check the features available for setting up and configuring radiology management workflows in the system, including: **a. Setup of masters:** Verify the system's capability to set up master data including necessary fields. **b. Configuration of SOPs and rules:** Validate the system's ability to configure standard operating procedures (SOPs) and rules governing radiology processes, including testing, and result reporting. **c. Information flow setup:** Confirm that the system enables the establishment of information flow between treating medical practitioners, radiology personnel, and the billing department to ensure seamless coordination and communication. **Step 3.** Configure radiology management workflows, including setting up masters, SOPs, rules, and information flow as per requirements. **Step 4.** Check that the system can generate report templates.	**1.** The system provides comprehensive options for setting up radiology workflows, including stage creation, user role assignment, and workflow controls. **2.** Controls related to radiology workflows can be configured and adjusted as needed within the system. **3.** Administrators or authorized users can generate and customize report templates for different radiology specialties.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Verify that the system provides options to create templates for different radiology specialties, such as X-rays, ultrasound (USG), MRIs, CT scans, etc. **Step 6.** Generate a report and verify that it is created as per the defined template.	**4.** Customized report templates are applied accurately and reflect the specific requirements of each radiology specialty.	

AAC.4. The system handles radiology test orders and images.		
AAC.4.b: The system creates/ modifies a new radiology request, generate a unique ID for the request, and link it to the patient's unique ID.		
Test Case: Verify that the system creates and modifies a new radiology request, generates a unique ID for it and links it to the patient's unique ID.		
Pre-requisite for test		**Test Validation**
1. Healthcare staff with authorization to manage radiology requests should be logged into the system. **2.** Digital unique identification mechanisms for radiological tests or procedures are configured and integrated with the system. **3.** Keep a dummy patient record available in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the radiology request management section of the system. **Step 2.** Initiate the process to create a new radiology request for a dummy patient. **Step 3.** Enter the necessary details for the new radiology request, including patient information, test type, and any additional notes. **Step 4.** Verify that the system generates a unique ID for the new radiology request. **Step 5.** Confirm that the unique ID is displayed and saved in the radiology request details.	**1.** System creates/modifies radiology test request, generates unique ID for the same and links it with the patient's unique ID.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 6. Check that the new radiology request is linked to the patient's unique ID. **Step 7.** Save the new radiology request and verify that it is correctly associated with the patient's unique ID. **Step 8.** Modify the existing radiology request by updating details such as test type, notes, or other relevant information. **Step 9.** Verify that the system retains the unique ID of the radiology request after modification.		

AAC.4. The system handles radiology test orders and images.	
AAC.4.c: The system sends notifications to the radiology department as soon as any test is booked.	
Test Case: Verify that the system sends notifications to the radiology department promptly upon the booking of any test in OPD or IPD, including relevant patient and test details.	
Pre-requisite for test	**Test Validation**
1. Healthcare providers with authorization to access radiology department functionalities should be logged into the system. **2.** Radiology department contact information and notification preferences are accurately recorded and accessible within the system. **3.** Keep a dummy patient record available in the system	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section where radiology tests are booked for OPD or IPD patients. **Step 2.** Book a new radiology test for a dummy patient, either in the outpatient department (OPD) or inpatient department (IPD), and complete the booking process. **Step 3.** Verify that the system triggers a notification to the radiology department upon booking the test. **Step 4.** Check that the notification includes relevant details such as patient name, patient ID, test type, test date, and any additional instructions or notes.	**1.** The system sends notifications to the radiology department upon test booking in OPD or IPD. **2.** Notifications include relevant patient and test details, such as patient identification, test type, and booking details.	Select Yes/No

AAC.4. The system handles radiology test orders and images.	
AAC.4.d: The system creates/ modifies templates for radiology reports.	
Test Case: Verify that the radiology system creates and modifies reporting templates for different specialties such as X-ray, ultrasound (USG), etc., and these templates are configurable and editable within the system.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff with authorization to manage the reporting template should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the report template management section of the radiology system. **Step 2.** Access the interface for creating a new reporting template. **Step 3.** Create a new reporting template for a specific radiology specialty (e.g., X-ray). **Step 4.** Add and configure sections relevant to the X-ray reports, including fields for findings, impressions, and recommendations. **Step 5.** Save the X-ray reporting template and verify that it is listed and accessible in the template management section. **Step 6.** Repeat steps 2 to 5 to create a reporting template for another specialty, such as ultrasound (USG). **Step 7.** Access the interface for modifying existing reporting templates. **Step 8.** Select an existing reporting template (e.g., the X-ray template) and make modifications (e.g., add new fields, adjust formatting). **Step 9.** Save the modified template and confirm that the changes are applied and reflected in the system. **Step 10.** Verify that the modified template is correctly used in the generation of new reports for the corresponding specialty. **Step 11.** Confirm that all reporting templates (for different specialties) are configurable and editable as needed, without affecting other templates.	**1.** The radiology system provides options for creating new reporting templates for different specialties such as X-ray, ultrasound (USG), etc. **2.** Reporting templates are configurable and editable within the system, allowing users to customize layout, formatting, and content. **3.** Newly created or edited reporting templates are stored and accessible for future use within the system.	Select Yes/No

AAC.4. The system handles radiology test orders and images.
AAC.4.e: The system captures and shows the radiological test status for every radiology test order.
Test Case: Verify that the system displays the status of radiological tests/examinations, including various statuses such as booked, ongoing, completed, reported, etc.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to access test/examination statuses should be logged into the system. 2. Multiple dummy patient test records with all possible statuses (booked, ongoing, completed, reported, etc.) should be available in the system at the time of testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the radiology test management section of the system. **Step 2.** Access the list of radiological tests or examinations. **Step 3.** Verify that each test or examination has a visible status indicator. **Step 4.** Check that the system displays the following statuses accurately: booked, ongoing, completed, reported. **Step 5.** Choose a sample test with the status (booked, ongoing, completed, reported) and update the test status. **Step 6.** Verify that the displayed status corresponds to the new state of the sample test.	1. The system provides options to view the status of tests/ examinations within the designated module or section with various status options such as booked, ongoing, completed, and reported, etc.	Select Yes/No

AAC.4. The system handles radiology test orders and images.
AAC.4.f: The system appends radiology reports.
Test Case: Verify that the system appends preliminary radiology reports in the system.

Pre-requisite for test	Test Validation
1. Healthcare provider with authorization to manage preliminary reports should be logged into the system. 2. A dummy patient with multiple radiology test orders assigned to them should be available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to appending radiology reports and tracking changes. **Step 2.** Select a dummy patient for whom multiple radiology test orders are assigned. **Step 3.** Process one of the radiology test orders. **Step 4.** Verify that the radiology report contains details related to the respective test order. **Step 5.** Process other test orders. **Step 6.** Verify that the report is appended (automatically/semi-automatically) by the subsequent test results for the respective test orders.	1. The system successfully appends radiology reports, capturing all necessary details and patient information.	Select Yes/No

AAC.4. The system handles radiology test orders and images.
AAC.4.g: The system has the capability to book radiology test appointment slots based on equipment and staff availability.
Test Case: Verify that the system books the radiology tests based on the availability of the machine and qualified staff, ensuring minimal wait time for patients by calculating machine availability.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to manage appointment and machine schedules should be logged in to the system. 2. Radiology test schedules are properly defined within the system. 3. Machine availability schedules and maintenance times are recorded within the system. 4. Keep a dummy patient record available in the system during testing, along with a unique identifier.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the radiology test booking module within the system. **Step 2.** Select the option to book a test such as an MRI for the dummy patient. **Step 3.** Check the schedule for an MRI on a specific date and check if any empty slot is available. **Step 4.** Check if the system allows to assign a staff/automatically assigns staff for the test based on their availability. **Step 5.** Try to schedule the MRI appointment on an unavailable slot, for example, a slot which is already booked for the machine or with a staff who is already booked during the slot and verify that the system does not allow to book this appointment. **Step 6.** Verify that the system allows to schedule the MRI appointment on an available slot with an available staff. **Step 7.** Confirm that the machine is marked as unavailable during the slot in which the appointment has been booked.	**1.** The system books the schedule of tests having set schedules based on machine and staff availability. **2.** Machine availability is updated based on scheduled tests and maintenance times, minimizing patient wait time.	Select Yes/No

AAC.4. The system handles radiology test orders and images.	
AAC.4.h: The system generates a non-editable final report once it is signed by the radiologist.	
Test Case: Verify that the system successfully generates finalized radiology reports signed by the radiologist and ensures that these reports are not editable after finalization.	
Pre-requisite for test	**Test Validation**
1. Healthcare provider with permission to finalize and generate radiology reports should be logged into the system. **2.** Create a dummy patient record linked with a radiology report.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the radiology report management section of the system. **Step 2.** Access a completed radiology test or examination that requires finalization. **Step 3.** Verify that there is an option to finalize the radiology report and sign it. **Step 4.** Generate the finalized radiology report and ensure it includes a digital signature or other indication of radiologist approval. **Step 5.** Save the finalized report and confirm that it is marked as "Finalized" or similar status in the system. **Step 6.** Attempt to edit the finalized report and verify that the system prevents any modifications. **Step 7.** Check that the finalized report is viewable but locked from further editing or changes. **Step 8.** Check that the system maintains a record of the finalization, including the date and time of finalization and the radiologist's signature.	**1.** The system successfully generates finalized radiology reports with the radiologist's signature appended. **2.** Finalized reports are locked and not editable after the finalization process, ensuring data integrity and compliance with regulatory requirements. **3.** The system should not allow the generation of the finalized report without the radiologist's signature.	Select Yes/No

AAC.4. The system handles radiology test orders and images.

AAC.4.i: The system flags the amended radiology reports issued by the radiologist.

Test Case: Verify that the system flags radiology reports when they are edited and issued to the patient after finalization.

Pre-requisite for test	Test Validation
1. Healthcare provider with authorization to manage radiology test reports should be logged into the system. **2.** Radiology reports are being generated and finalized within the system. **3.** A lead radiologist is designated and has appropriate access rights to edit reports.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the radiology report management section of the system. **Step 2.** Access a finalized radiology report that has been issued to a patient. **Step 3.** Verify that the report is marked as "Finalized" or similar status in the system. **Step 4.** Attempt to edit the finalized report (e.g., correct errors, and update information). **Step 5.** Confirm that the system allows for editing of the finalized report, and triggers a flag or notification indicating that changes are being made to a finalized report. **Step 6.** Save the edited report and verify that the system updates the status to reflect that it has been modified after finalization. **Step 7.** Check that the system logs details of the changes made, including the date and time of the modification and the user who made the changes. **Step 8.** Ensure that the edited report is flagged or marked as revised or amended to differentiate it from the original finalized report	**1.** The system should be able to edit finalized radiology report for the patient through an authorized stakeholder's id. **2.** The system should flag the test report that are edited and re-issued to patient after finalization.	Select Yes/No

AAC.4. The system handles radiology test orders and images.	
AAC.4.j: The system sends notifications to patients and medical professionals when their reports are ready.	
Test Case: Verify that the system sends notifications to patients and medical professionals once their reports are ready through a digital communication channel.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff with authorization to manage test reports should be logged into the system. **2.** Patient contact information, including email addresses or phone numbers, is accurately recorded in the system. **3.** Reports, such as pathology reports, radiology reports, or other medical documents, are generated within the system. **4.** Patient consent to receive the notification has been obtained and recorded in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionality related to managing radiology report notifications. **Step 2.** Finalize a report for a dummy patient and ensure it is marked as ready for review. **Step 3.** Verify that the system triggers notifications to be sent once the report is reviewed and approved. **Step 4.** Check that the system sends a notification to the patient using the following digital communication channels such as SMS, Email, Chat application, and patient portal notification **Step 5.** Confirm that the notification includes relevant details such as the report's availability, instructions for accessing it, and any required credentials or links. **Step 6.** Verify that the system also sends notifications to relevant medical professionals (e.g., referring doctors, and specialists) using the appropriate digital channels such as SMS, Email, and Chat application **Step 7.** Check that notifications to medical professionals contain necessary details including patient information, report type, and access instructions. **Step 8.** Confirm that notifications are sent promptly after the report is finalized and are received by both patients and medical professionals	**1.** The system successfully sends notifications to the patient and medical professionals for the availability of the report.	Select Yes/No

AAC.4. The system handles radiology test orders and images.
AAC.4.k: The system allows patients to view/download their reports.
Test Case: Verify that the system allows patients to access and download their test reports, when notifications are sent via email, WhatsApp/ online messaging platform, SMS, or patient portal., ensuring ease of access and reducing the potential for errors in manual communication and record-keeping.

Pre-requisite for test	Test Validation
1. Keep a sample radiology test report that is linked to the dummy patient records available in the system. **2.** Patient notification functionalities, including patient portal notifications, are properly configured and enabled within the system. **3.** Login credentials for healthcare staff with authorization to access radiology reports should be available at the testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Log into the system as a healthcare staff. **Step 2.** Navigate to the section with the functionality related to managing radiology reports. **Step 3.** Select the dummy patient for whom the test report has been generated. **Step 4.** Finalize the dummy radiology test report and save it in the system. **Step 5.** Log into the patient portal as a dummy patient **Step 6.** Verify that the system sends notifications through the preferred digital communication channel for report availability. **Step 7.** Verify that the notification indicates the availability of the test report and provides relevant information about the report. **Step 8.** Send a notification as well as a PDF or link of the report to the patient through a preferred digital communication platform such as a patient portal, email, chat application, SMS, etc. **Step 9.** Check that the user is able to view and download the test report after receiving the notification. **Step 10.** Open the downloaded report to ensure it is complete.	**1.** The system sends a notification to the patient via digital communication channels such as patient portal, email, chat application, SMS once the report is finalized. **2.** The patient accesses/downloads the report through notification.	Select Yes/No

AAC.4. The system handles radiology test orders and images.

AAC.4.I: The system sends a notification when a test ordered is contraindicated based on the patient's condition.

Test Case: Verify that the system checks contraindications when a test is ordered, ensuring that tests incompatible with the patient's condition are flagged with a visible warning and notifications that cannot be ignored.

Pre-requisite for test	Test Validation
1. A healthcare provider with authorization to manage the radiology test management system should be logged into the system. **2.** Test ordering functionality is enabled and configured within the system. **3.** Keep a dummy patient record with a treatment plan/condition pre-specified, available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section where tests are ordered. **Step 2.** Select a dummy patient with known contraindications for certain tests (e.g., pregnancy, chest x-ray in case of pacemaker, allergies, pre-existing conditions). **Step 3.** Initiate the process to order a new test for the patient. **Step 4.** Enter the details of the test being ordered. **Step 5.** Verify that the system automatically checks for contraindications based on the patient's condition and medical history. **Step 6.** Confirm that if the ordered test is incompatible with the patient's condition, the system displays a visible warning or alert indicating the contraindication. **Step 7.** Check that the warning includes specific details about the nature of the contraindication and the reasons why the test is flagged. **Step 8.** Confirm that the system generates a notification about the contraindication to relevant parties (e.g., ordering physician, medical team) including details about the flagged issue.	**1.** The system performs contraindications check when a test is ordered. **2.** If the ordered test is contraindicated for the patient, the system flags it with a visible warning that cannot be ignored. **3.** The warning message clearly indicates the reason for the contraindication and advises against proceeding with the test order.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 9. Stimulate a scenario where a doctor prescribes a drug that is contraindicated to a dummy patient's health condition. **Step 10.** Check that the system provides an option to reject or dismiss the alert and be able to prescribe that drug to the dummy patient. **Step 11.** Retrieve dummy patient records from the system. **Step 12.** Check that the prescribed drug is properly recorded in the patient's health record.	**4.** Doctors should be able to dismiss the alert and prescribe medication to the patient.	Select Yes/No

AAC.4. The system handles radiology test orders and images.		
AAC.4.m: The system links radiology report/s of the patient to their ABHA.		
Test Case: External Certification		
Pre-requisite for test		**Test Validation**
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External Certification	Confirmation of ABDM certification.	Select Yes/No

AAC.4. The system handles radiology test orders and images.	
AAC.4.n: The system maintains a record of the tests that are outsourced to other radiology centers and maintains a repository of their results.	
Test Case: Verify that the system maintains accurate and complete digital records of radiology tests and their results sent to an external center.	
Pre-requisite for test	**Test Validation**
1. A healthcare provider with authorization to manage the laboratory test management system should be logged into the system. **2.** Test ordering and tracking functionality is enabled and configured within the system. **3.** External centers for conducting tests are identified and integrated into the system. **4.** Test requisition forms or orders include relevant details such as patient information, test type, and destination external center. **5.** Keep a dummy radiology test that is sent to the external lab available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the radiology test management section of the system. **Step 2.** Verify that the system includes an option or section for managing and viewing records of tests sent to external centers. **Step 3.** Select a dummy radiology test that has been sent to an external center for analysis. **Step 4.** Confirm that the system displays the test details, including the test type, date, and patient information, as well as the external center to which the test was sent. **Step 5.** Access the records for the selected test and verify that the system shows the complete details of the test results received from the external center. **Step 6.** Check that the results include all necessary information such as findings, interpretations, and any additional notes from the external center. **Step 7.** Verify that the digital record is complete, accurate, and matches the results provided by the external center.	**1.** The system maintains a digital record of test orders sent to external centers, including all relevant details. **2.** The system maintains an accurate repository of test results received from external centers.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 8. Check that the system maintains a clear and comprehensive log of the test records, including timestamps for when the test was sent and when the results were received. **Step 9.** Confirm that any updates or changes to the test results are accurately reflected in the system. **Step 10.** Verify that the system provides an option to audit or review the history of tests sent to external centers and their results.		

AAC.5. The system supports patient admissions.		
AAC.5.a: The system configures rules/ workflow for patient admission.		
Test Case: Verify that the system configures different rules/workflows for each patient admission type.		
Pre-requisite for test		**Test Validation**
1. Healthcare providers with authorization to manage patient admission should be logged into the system. **2.** Dummy patient details must be available in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the patient admission workflow configuration section of the system. **Step 2.** Access the settings or configuration options for defining admission rules and workflows. **Step 3.** Identify and select the different types of patient admissions (e.g., emergency, planned admissions, and daycare admissions. **Step 4.** Configure specific rules and workflows for each admission type. e.g. (a). Emergency Admission: Define workflows for immediate triage, rapid response, and emergency protocols;	**1.** The system allows users to configure different rules for each type of admission. **2.** Users can define criteria such as required documents, workflow steps, etc.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
(b) Inpatient Admission: Configure workflows for room allocation, ongoing care, and discharge planning. **Step 5.** When configuring the rule for emergency admission, check that the system offers the option to choose triage for emergency admissions. **(Optional)** **Step 6.** Save the configured rules and workflows for each admission type. **Step 7.** Check the system by creating patient admissions of each type and verify that the appropriate workflows and rules are applied. **Step 8.** Verify that each admission type's workflow includes all relevant steps, notifications, and actions specific to the admission type. **Step 9.** Ensure that the system allows for modifications and updates to the rules and workflows as needed. **Step 10.** Confirm that all workflows and rules are consistently applied across different patient admissions and accurately reflect the configured settings.	**3.** Configured rules are saved successfully and applied when processing admission.	

AAC.5. The system supports patient admissions.	
AAC.5.b: The system configures templates for various healthcare services.	
Test Case: Verify that the system enables configuration and editing of various templates used in healthcare organizations, ensuring clarity on mandatory and non-mandatory fields.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff with authorization to manage template configuration and editing should be logged into the system. **2.** Various templates utilized in healthcare organizations, such as patient admission forms, discharge summaries, patient progress notes, and summaries, are accessible in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionality related to template configuration and editing. **Step 2.** Identify the templates to be configured and edited for patient admission forms, discharge summary patient progress notes, etc. **Step 3.** Select the specific template to be configured. **Step 4.** Access the template configuration options within the system. **Step 5.** Configure a new or existing template, including: Adding fields to the template (e.g., patient name, date of birth, medical history), Designating fields as mandatory or non-mandatory. **Step 6.** Check that the system provides clear indicators or labels for mandatory fields (e.g., asterisks, bold text) and non-mandatory fields. **Step 7.** Save the configured template and verify that the settings are applied correctly. **Step 8.** Test the template by using it in a practical scenario, such as filling out a form or generating a document. **Step 9.** Confirm that mandatory fields are marked and require input before submission or saving, and that non-mandatory fields are optional. **Step 10.** Edit the template to add, remove, or modify fields, and verify that changes are correctly updated and reflected in the template. **Step 11.** Perform steps 2 to 11 for two different scenarios such as discharge summary and patient progress notes.	**1.** The system allows users to configure and edit templates. **2.** Mandatory fields are clearly marked, distinguishing them from non-mandatory fields. **3.** Users can add, remove, or rearrange fields within the template as needed. **4.** Changes made to the template are reflected in the layout and structure.	Select Yes/No

AAC.5. The system supports patient admissions.
AAC.5.c: The system manages patient's admission-related information.
Test Case: Verify that the system effectively captures and manages admission-related information, including patient demographics, preliminary diagnosis, medical history, care plan, date of admission, expected date of discharge, package details, and payor details, and provides capabilities for data capture, document upload, insurance details.

Pre-requisite for test	Test Validation
1. Healthcare provider with authorization to manage patient admission should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to capturing patient details for admission. **Step 2.** Initiate the process of capturing admission-related information. **Step 3.** Enter patient demographics, including name, age, gender, contact information, etc. **Step 4.** Record preliminary diagnosis and medical history as relevant. **Step 5.** Input care plan details, including treatment goals and interventions. **Step 6.** Specify the date of admission and expected date of discharge if applicable. **Step 7.** Enter package details, if applicable, including treatment packages or plans chosen by the patient. **Step 8.** Capture payor details, such as insurance information or payment method (if applicable). **Step 9.** Ensure that mandatory fields are clearly marked and require completion before proceeding. **Step 10.** Check the system's functionality to scan and upload patient documents. **Step 11.** Submit the admission form. **Step 12.** Navigate to the patient's admission record within the system. **Step 13.** Select the option to edit admission-related information. **Step 14.** Modify relevant fields or details within the admission record. **Step 15.** Save the changes and confirm the successful editing of the information.	**1.** The system provides comprehensive forms or fields to capture patient demographics, preliminary diagnosis, medical history, care plan, date of admission, package details, and payor details. **2.** Data capture and document upload functionalities are available within the system for attaching relevant documents. **3.** The system effectively manages and stores the captured admission-related information, ensuring accessibility and data integrity. **4.** Healthcare providers is able to update patient-related information.	Select Yes/No

AAC.5. The system supports patient admissions.
AAC.5.d: The system creates and manages healthcare packages for patients with inclusion/exclusion of services.
Test Case: Verify that the system effectively displays, creates, and manages different packages offered by the healthcare organization and can assign these packages to the patient, including details such as services included/excluded, charges, and options for managing and upgrading a package.

Pre-requisite for test	Test Validation
1. Healthcare providers with permission to manage package information should be logged into the system. **2.** Healthcare services should be already created and available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to managing healthcare packages. **Step 2.** Select the option to create a new healthcare package. **Step 3.** Create a new package entering details such as healthcare services included, excluded services, charges, etc. **Step 4.** Save the package details. **Step 5.** Try to assign a selected package to the dummy patient and check that the system assigns the selected package to the patient. **Step 6.** Select an upgrade/update option within a package. **Step 7.** Verify that the system provides clear instructions for upgrading/updating packages, if applicable. **Step 8.** Make some changes in the package such as adding services, removing a few services, updating the charges, etc. **Step 9.** Check that any changes to the package are updated in the system and properly assigned to the patient.	**1.** The system enables creation and management of healthcare packages. **2.** Detailed information for each package, including services included/exclude d, charges, and options for upgrades, is presented. **3.** Healthcare providers should be able to create and modify packages assigned to patients.	Select Yes/No

AAC.5. The system supports patient admissions.
AAC.5.e: The system designates the treating medical practitioners.
Test Case: Verify that the system designates treating medical practitioners along with the supporting team for the patient and displays this information accurately.

Pre-requisite for test	Test Validation
1. Healthcare providers with permission to manage patient information and configure physician assignments should be logged into the system. **2.** User roles with permission to view patient information and configure physician assignments are defined within the system. **3.** Dummy medical practitioner records should be available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionality related to designating medical practitioners to a patient. **Step 2.** Identify the section or fields for designating primary and/or secondary medical practitioners. **Step 3.** Assign a primary treating medical practitioner to the patient by selecting from a list of available practitioners: **Step 4.** Assign additional support team members, such as nurses, physician assistants, or other healthcare professionals, to the patient: **Step 5.** Ensure that the system provides options to add multiple support team members. **Step 6.** Verify that each team member's role is clearly defined (e.g., primary nurse, assistant physician). **Step 7.** Save the assignments and verify that the designated treating practitioner and support team members are accurately displayed in the patient's record. **Step 8.** Confirm that the system clearly shows the hierarchy or roles of the assigned medical practitioners and support team, ensuring that the primary treating practitioner is highlighted.	**1.** The system allows for the designation of treating medical practitioner and supporting team for the patient.	Select Yes/No

AAC.5. The system supports patient admissions.		
AAC.5.f: The system auto-populates all relevant data fields when a patient is admitted on entering their unique patient Identifier.		
Test Case: Verify that the system auto-populates patient data, including demographic details and medical history, by entering the unique patient ID, facilitating efficient data retrieval for repeat patients.		
Pre-requisite for test		**Test Validation**
1. Healthcare providers with permission to manage patient information should be logged into the system. **2.** Dummy patient OPD records, including demographic details and medical history, should be available in the system. **3.** Unique patient ID for dummy patient should be available.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the section with the functionality related to managing patient admissions. **Step 2.** Try to admit the dummy patient in IPD using the unique patient identifier. **Step 3.** Verify that demographic details and medical history are automatically populated based on the entered patient ID. **Step 4.** Manually review the auto-populated demographic details to ensure accuracy. **Step 5.** Validate the auto-populated medical history against the patient's known medical records to ensure completeness.	**1.** The system successfully auto-populates demographic details and medical history based on the entered unique patient ID.	Select Yes/No

AAC.5. The system supports patient admissions.		
AAC.5.g: The system sends notifications to all relevant departments and staff during the admission/transfer process.		
Test Case: Verify that the system sends notifications to relevant stakeholders, including floor managers, administrators, and registration desk personnel, during various patient-related processes such as admission/transfer.		
Pre-requisite for test		**Test Validation**
1. Healthcare providers with permission to send notifications should be logged into the system. **2.** User roles with permissions to send and receive notifications are defined within the system. **3.** Various patient-related processes, such as admission, discharge, transfer, and appointment scheduling, are configured in the system.		Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to discharge management. **Step 2.** Initiate a discharge process that requires sending notifications to stakeholders like ward assignment, bed allocation, patient transfers, billing, etc. **Step 3.** Enter the required information for the discharge process (For e.g. details-ward type, and number). **Step 4.** Submit the discharge request to trigger the notification broadcast. **Step 5.** Verify notification delivery by confirming that notifications are sent and received by designated stakeholders, including floor managers, administrators, and registration desk personnel.	**1.** The system triggers notifications to relevant stakeholders, including floor managers, administrators, and registration desk personnel, during various patient-related processes.	Select Yes/No

AAC.5. The system supports patient admissions.

AAC.5.h: The system displays details of occupied beds.

Test Case: Verify that the system provides real-time insights to administrative staff and senior management regarding bed occupancy status, including vacant, preoccupied, occupied, and reserved beds.

Pre-requisite for test	Test Validation
1. Healthcare providers with permission to access bed management should be logged into the system. **2.** Keep dummy patient records available in the system. **3.** User roles with permissions to access bed occupancy data and generate reports are defined within the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to bed management or occupancy monitoring. **Step 2.** Check that the system provides options to view bed status based on parameters such as vacant, preoccupied, occupied, and reserved. **Step 3.** Confirm that the system displays the current status of each bed accurately, distinguishing between vacant, preoccupied, occupied, and reserved beds.	**1.** The system provides data on bed occupancy status, including vacant, preoccupied, occupied, and reserved beds.	Select Yes/No

AAC.5. The system supports patient admissions.	
AAC.5.i: The system has the capability to predict bed availability.	
Test Case: Verify that the system predicts bed availability based on data and enables proactive management of the healthcare organization's capacity.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff with authorization to manage predictive analytics or bed management modules should be logged into the system. **2.** Dummy historical data on bed occupancy, patient admissions, discharges, and other relevant data are available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to bed availability. **Step 2.** Access the predictive analytics feature for bed availability and verify that the system uses historical data and current trends to forecast future bed availability. **Step 3.** Review the predicted bed availability for a specified time frame (e.g., next 24 hours, next 7 days) and verify that the predictions include details such as expected bed vacancies, occupancy rates, and potential bottlenecks. **Step 4.** Verify that the system allows users to adjust the predictive model parameters (e.g., occupancy rates, patient turnover rates) to refine the bed availability forecasts. **Step 5.** Confirm that administrative staff can use the predictive data to proactively manage capacity, such as by adjusting staffing levels, reallocating resources, or coordinating patient transfers.	**1.** The system predicts bed availability based on dummy historical data, enabling proactive management of healthcare organization capacity.	Select Yes/No

AAC.6. The system manages patient discharge and transfer processes.
AAC.6.a: The system creates/modifies a discharge summary.
Test Case: Verify that the system creates or modifies discharge summaries based on predefined templates.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to manage templates for discharge is logged into the system. **2.** User roles with permissions to generate discharge summaries and access predefined templates are defined within the system. **3.** Predefined templates for discharge summaries are configured and available within the system. **4.** Keep dummy information required for patient discharge available for use.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the discharge summary section or patient discharge module of the system. **Step 2.** Verify that the system provides predefined templates for discharge summaries, tailored to different patient conditions or treatment plans. **Step 3.** Select a dummy patient ready for discharge and initiate the creation of a discharge summary. **Step 4.** Choose a predefined template that matches the dummy patient's condition or treatment from the available options. **Step 5.** Verify that the selected template automatically populates with relevant patient information, such as patient demographics, medical history, treatment summary, medication prescribed, and follow-up instructions. **Step 6.** Modify the discharge summary as needed by adding, editing, or removing information within the predefined template. **Step 7.** Verify that the system allows customization of the discharge summary template, such as inserting additional sections (e.g., patient education). **Step 8.** Confirm that all mandatory fields in the template are clearly marked and require completion before finalizing the discharge summary.	**1.** System creates and modifies discharge summary based on predefined template.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 9. Save the discharge summary and verify that the system correctly generates the summary based on the modified template. **Step 10.** Review the generated discharge summary to ensure that all patient-specific information is accurately reflected.		

AAC.6. The system manages patient discharge and transfer processes.	
AAC.6.b: The system shows the list of patients due for discharge.	
Test Case: Verify that the system generates a list of patients due for discharge on a specific day and appropriately identifies discharges, including Leave Against Medical Advice (LAMA), Discharge Against Medical Advice (DAMA), and Disappeared cases.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff with authorization to access the discharge list is logged into the system. **2.** Dummy patient records, including admission and discharge information, are accurately maintained within the system. **3.** User roles with permissions to generate discharge lists and access patient discharge information are defined within the system. **4.** Keep multiple patient records with different types of discharge (LAMA, DAMA, disappeared cases) should be available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to discharge management. **Step 2.** Select the option to generate a list of patients due for discharge on a specified date. **Step 3.** Verify that the system displays a comprehensive list of patients scheduled for discharge. **Step 4.** Mark a dummy patient as LAMA, DAMA, etc.	**1.** The system generates a list of patients due for discharge on the specified day.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Verify the presence of patients marked as Leave Against Medical Advice (LAMA), Discharged Against Medical Advice (DAMA), or Disappeared cases in the discharge list and are clearly labeled and distinguishable from other discharge statuses.	**2.** The system appropriately identifies different types of discharges, including Leave Against Medical Advice (LAMA), Discharged Against Medical Advice (DAMA), and Disappeared cases, if applicable.	

AAC.6. The system manages patient discharge and transfer processes.

AAC.6.c: The system creates and processes a checklist and manages clearances for patient discharge, if any.

Test Case: Verify that the system creates a discharge checklist capturing all necessary clearances and checkpoints before a patient is discharged, including recording reasons for any delays in the discharge process.

Pre-requisite for test	Test Validation
1. Healthcare staff (finance, clinical, etc.) with authorization to manage patient discharge is logged into the system. **2.** User roles with permissions to initiate discharge processes, access discharge checklists, and record delay reasons are defined within the system. **3.** Dummy patient information, including admission details and care plans, is accurately maintained within the system. **4.** List out the names of checkpoints required at the time of discharge.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the discharge management or patient discharge section of the system. **Step 2.** Verify that the system provides an option to create or access a discharge checklist for patients scheduled for discharge. **Step 3.** Select a dummy patient due for discharge and initiate the creation of a discharge checklist. **Step 4.** Verify that the discharge checklist including all essential checkpoints for clearance such as financial or clinical clearance is activated. **Step 5.** Log in as a finance/clinical department employee to access the discharge checklist and tick off the checkpoints as applicable. **Step 6.** Intentionally delay one or more checkpoints in the discharge process such as delay in obtaining financial clearance or room cleaning and verify that the system distinguishes it from the completed checkpoints. **Step 7.** Use the system's functionality to record the reason for the delay. **Step 8.** Verify that the system accurately captures and records the reason for the delay in the designated field or section. **Step 9.** Complete all the checkpoints and submit the discharge checklist.	**1.** The system creates a discharge checklist capturing all necessary checkpoints before patient discharge. **2.** The system allows to tick off or complete the checkpoints in the discharge checklist. **3.** The system allows for the recording of reasons for any delays encountered during the discharge process.	Select Yes/No

AAC.6. The system manages patient discharge and transfer processes.
AAC.6.d: The system manages transfer patients within the healthcare organizations.
Test Case: Verify that the system facilitates and manages patient transfers by notifying the receiving healthcare team of the patient's condition, medical history, current treatment plan, and other relevant details, ensuring appropriate care during the transfer process.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to manage the transfer of patients (transfer initiating and receiving department/facility) is logged into the system. **2.** User roles with permissions to initiate patient transfers, and access patient records, are defined within the system. **3.** Dummy patient information, including medical history, treatment plan, and care team details, is accurately maintained within the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient's profile in the system. **Step 2.** Initiate the patient transfer process by selecting the appropriate option to transfer the patient to another healthcare team or facility. **Step 3.** Enter the required details for the transfer, including the receiving healthcare team/facility, transfer reason, and any special instructions. **Step 4.** Confirm that the system automatically compiles the patient's condition, medical history, current treatment plan, and any other relevant details. **Step 5.** Verify that the system sends a notification to the receiving healthcare team with the compiled patient information. **Step 6.** Confirm that the receiving healthcare team acknowledges the receipt of the notification within the system. **Step 7.** Check that the patient's status is updated in the system to reflect the transfer and that the receiving healthcare team has access to all relevant patient information.	**1.** The system captures patient transfers. **2.** The system notifies/updates the receiving healthcare team of the patient's impending transfer. **3.** The notification contains comprehensive information about the patient, including demographics, medical history, current treatment plan, and other relevant details.	Select Yes/No

AAC.6. The system manages patient discharge and transfer processes.
AAC.6.e: The system raises interim bills upon the patient's request.
Test Case: Verify that the system generates interim bills upon patient request and that these interim bills are clearly identified.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to manage patient bills is logged into the system. 2. User roles with permissions to generate interim bills and access billing functionalities are defined within the system. 3. Dummy patient records, including treatment details and billing information, are accurately maintained within the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to bill management. **Step 2.** Select a dummy patient admitted in the system. **Step 3.** Verify that the system provides an option to generate an interim bill upon patient or authorized personnel request. **Step 4.** Initiate the process to generate an interim bill for the selected patient. **Step 5.** Confirm that the system generates the interim bill and clearly labels it as an "Interim Bill" to distinguish it from final or other types of bills. **Step 6.** Verify that the interim bill includes all necessary patient information. **Step 7.** Test the system's ability to generate multiple interim bills for the same patient over time, ensuring that each bill is clearly labeled and distinct.	1. The system generates interim bills. 2. Interim bills capture billing details including services rendered and associated charges. 3. Interim bills are clearly identified as such, distinguishing them from regular invoices or final bills.	Select Yes/No

AAC.6. The system manages patient discharge and transfer processes.

AAC.6.f: The system links the discharge summary of the patient with their ABHA.

Test Case: Verified by external certification.

Pre-requisite for test	Test Validation
	External Certification

Steps to produce	Expected Outcome	Note/Deviation
External Certification	Confirmation of ABDM certification.	Select Yes/No

AAC.7. The system has capabilities to disseminate information to patients.

AAC.7.a: The system provides important care delivery information for patients.

Test Case 1: Verify that the system effectively disseminates important information to patients.

Pre-requisite for test	Test Validation
1. Healthcare providers or administrative staff is logged in to the system by using valid login credentials. **2.** Dummy information to be disseminated to patients is available within the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section or module where hospital information is provided. **Step 2.** Verify that the system provides options to disseminate important information to patients, such as medical test results, appointment reminders, important updates, or alerts. **Step 3.** Select a dummy patient or group of patients to receive the information. **Step 4.** Choose the type of important information to be disseminated and enter relevant content. **Step 5.** Initiate the process of disseminating the information. **Step 6.** Verify that the system sends the information to the intended patients through the selected communication channels. **Step 7.** Check that important information such as appointment details (location, address, contact details), reports availability, follow-up schedule, etc. is accessible to the user.	**1.** The system displays the important care delivery information clearly.	Select Yes/No

AAC.7. The system has capabilities to disseminate information to patients.		
AAC.7.a: The system provides important care delivery information for patients.		
Test Case 2: Verify that the system displays data in another local language. **(Optional)**		
Pre-requisite for test		**Test Validation**
1. Healthcare provider or administrative staff is logged in to the system by using valid login credentials.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the system settings or user preferences section where language options are available. **Step 2.** Verify that the system provides an option to select a local language from a list of available languages. **Step 3.** Choose the desired local language from the list and apply the changes. **Step 4.** Confirm that the system refreshes or reboots, if necessary, to apply the new language settings. **Step 5.** Verify that all displayed data, including text, labels, buttons, and menus, is correctly translated into the selected local language.	**1.** User sees the information in his/her preferred language which is available in the system.	Select Yes/No

AAC.7. The system has capabilities to disseminate information to patients.	
AAC.7.b: The system has the capability to display its NABH certifications.	
Test Case: Verify that the system displays all the certifications or accreditations obtained by healthcare organizations under the system login page.	
Pre-requisite for test	**Test Validation**
1. Healthcare provider or administrative staff is logged in to the system by using valid login credentials. **2.** A list of certifications or accreditations obtained by the healthcare organization should be available as well as relevant information such as issue date, issue authority, etc.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section designated for displaying certifications or accreditations obtained by the healthcare organization. **Step 2.** Check that the certifications or accreditations section is clearly visible and prominently displayed on the login page. **Step 3.** Confirm that the section includes relevant details, such as: certification or accreditation name, Issuing organization or body, date of issuance, certificate number, or reference. **Step 4.** Check that NABH certification or accreditation is displayed with its official logo or emblem, if applicable, to enhance authenticity and recognition.	**1.** System displays certifications obtained by healthcare organizations.	Select Yes/No

AAC.8. The system manages patient feedback, experience and complaints.

AAC.8.a: The system has the capability to receive feedback and complaints from the patients/family members.

Test Case: Verify that the system has the capability to receive feedback and complaints from patients/family members and records the data accurately.

Pre-requisite for test	Test Validation
1. Patient feedback collection mechanisms through various applicable channels such as SMS/WhatsApp are integrated and operational. **2.** The patient or family member is registered in the system with valid contact details (e.g., mobile number, email). **3.** The system has pre-configured patient satisfaction survey forms. **4.** Log-in credentials for patients and healthcare staff should be available at the time of testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Log in to the system as a patient or family member through the patient portal. **Step 2.** Navigate to the feedback/surveys section. **Step 3.** Check that the system provides an option to fill out a patient feedback/ survey or submit a complaint. **Step 4.** Select the "Patient Satisfaction Survey" option. **Step 5.** Verify that the system presents a survey form containing at least the following questions: **1.** How would you rate your overall experience at the hospital? **2.** How would you rate the quality of care, including doctor consultation, nursing care, etc.? **3.** How would you rate the healthcare staff's communication and explanation of the treatment plan? **4.** How would you rate the hospital environment, including cleanliness and amenities? **5.** How would you rate the ease of registration/discharge processes? **Step 6.** Rate each question on a 5-point scale. **Step 7.** Submit the survey. **Step 8.** Verify that the system confirms the submission of the feedback and generates a rating analysis. **Step 9.** Log in to the system as an administrator or support staff. **Step 10.** Navigate to the feedback management dashboard. **Step 11.** Verify that the submitted feedback is logged and visible in the system. **Step 12.** Check that the feedback includes the 5-point rating scale analysis for each question. **Step 13.** Return to the patient portal and initiate a complaint submission. **Step 14.** Fill out the complaint form with a detailed description and submit it. **Step 15.** Verify that the system confirms the receipt of the complaint and generates a unique reference number.	**1.** The system allows patients or family members to submit feedback via a structured satisfaction survey or to file a complaint. **2.** Feedback surveys contain the required questions, are rated on a 5-point scale, and produce rating analysis. **3.** Complaints are logged with a unique reference number, and the resolution process is tracked within the system. **4.** The system allows sharing of the feedback form via SMS, email, or online messaging platforms. **5.** The system confirms the successful submission of surveys and complaints. **6.** Notifications about complaint resolution are sent to patients, and feedback records are stored securely.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 16. Check that the system sends an SMS, email, or link (URL or QR code) to the patient's registered mobile number or email with a link to the feedback form. **Step 17.** Access the feedback form through the link received and complete the survey. **Step 18.** Log in to the system as support staff and track the complaint resolution process. **Step 19.** Verify that the complaint resolution details (including status and outcome) are logged in the system. **Step 20.** Ensure that the system sends notifications to the patient regarding the resolution of their complaint.		

AAC.8. The system manages patient feedback, experience and complaints.

AAC.8.b: The system analyzes the feedback received and generates reports/ updates dashboards.

Test Case: Verify that the system effectively utilizes patient feedback for process improvement and generates analytical reports/ dashboards.

Pre-requisite for test	Test Validation
1. Healthcare provider or administrative staff with access to the feedback module is logged in to the system by using valid login credentials. **2.** User roles with permissions to access and analyze patient feedback data are defined within the system. **3.** Dummy patient feedbacks are available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to managing patient feedback.	**1.** The system effectively utilizes patient feedback to analyze data and generates a report for it.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 2. Review a sample of patient feedback entries to identify common issues reported by patients, such as long wait times during appointments, communication preferences, treatment methods, etc. **Step 3.** Check if the system allows the healthcare organization's staff to extract actionable insights from the patient feedback, such as identifying areas for improvement in scheduling processes. **(Optional)** **Step 4.** Check that the system is able to analyze feedback data by using an analysis tool. **Step 5.** Generate a report for the feedback received as required.		

AAC.8. The system manages patient feedback, experience, and complaints.	
AAC.8.c: The system captures patient-reported outcome measures (PROMs).	
Test Case: Verify that the system captures patient-reported outcome measures (PROMs) and accurately records the data.	
Pre-requisite for test	**Test Validation**
1. The user is logged into the system with appropriate permissions. **2.** The system has been configured to support PROMs surveys. **3.** Keep a dummy patient record available in the system	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section for patient-reported outcome measures (PROMs). **Step 2.** Select a dummy patient for whom PROMs data needs to be collected. **Step 3.** Initiate the PROM survey for the selected patient. **Step 4.** Verify that the system presents a standardized PROMs questionnaire relevant to the patient's condition and the survey's objectives.	**1.** The system presents a standardized PROMs questionnaire to the patient.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Ensure that the survey includes questions about the patient's health status, symptoms, and overall well-being, as listed in Annexure XXX. **Step 6.** Allow the patient to complete the survey via the patient portal, mobile app, or other designated method. **Step 7.** Verify that the patient can submit responses without errors and that the system captures the data accurately. **Step 8.** Check that the system records the submitted PROMs data in the patient's record. **Step 9.** Access the patient's record and verify that the PROMs data is visible and correctly displayed. **Step 10.** Ensure that the PROMs data is categorized and organized as per the standardized format. **Step 11.** Verify that the system allows authorized users to review and analyze the PROMs data. **Step 12.** Check that the system provides functionality for generating reports based on the captured PROMs data. **Step 13.** Ensure that all actions related to the collection and recording of PROMs data are logged in the system's audit trail.	**2.** The patient is able to complete and submit the PROMs survey without errors. **3.** The system accurately records and stores the submitted PROMs data in the patient's record. **4.** PROMs data is clearly categorized and organized in the patient's record. **5.** Authorized users can access and analyze the PROMs data and generate relevant reports.	

AAC.8. The system manages patient feedback, experience, and complaints.

AAC.8.d: The system captures Patient-reported experience measures (PREMs).

Test Case: Verify that the system captures Patient-reported Experience Measures (PREMs) from patients and their families about their experiences with healthcare services.

Pre-requisite for test	Test Validation
1. The patient or family member is registered in the system. **2.** PREMs survey functionality is enabled in the system. **3.** The system has pre-configured PREMs questionnaires.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Log in to the system as a patient or family member via the patient portal. **Step 2.** Navigate to the "Experience Surveys" or "Patient Feedback" section. **Step 3.** Verify that the system provides an option to fill out a Patient-reported Experience Measures (PREMs) survey. **Step 4.** Select the "Patient-reported Experience Survey" option. **Step 5.** Verify that the system presents a survey form containing questions about patient experiences, including communication with healthcare providers, responsiveness of the healthcare system, overall satisfaction with the care received, ease of access to healthcare services, and staff professionalism and interaction. **Step 6.** Answer all survey questions based on your experience and submit the form. **Step 7.** Verify that the system confirms the submission of the experience survey and provides feedback acknowledgment. **Step 8.** Log in to the system as an administrator or healthcare staff. **Step 9.** Navigate to the experience survey dashboard. **Step 10.** Verify that the submitted PREMs data is recorded and visible in the system, categorized by patient, date, and experience type. **Step 11.** Check that the data includes individual responses to the survey questions. **Step 12.** Verify that the system generates reports or visual summaries of patient-reported experience data for analysis by healthcare staff. **Step 13.** Ensure that the system sends notifications or links to patients' registered contact details (SMS, email) for completing PREMs surveys when appropriate.	**1.** The system presents a comprehensive PREMs survey form covering key aspects of patient experience. **2.** Patients can successfully submit their experience feedback. **3.** The system stores and categorizes patient-reported experience data for future reference. **4.** PREMs data is accessible for analysis by healthcare staff to improve the quality of services. **5.** Notifications for PREMs surveys are sent to patients' registered contact details.	Select Yes/No

Chapter 2 - Continuity of Care (COP)

COP.1. The system manages consultation services in OPD and IPD.

COP.1.a: The system records and reviews initial assessment in OPD and IPD and patient progress.

Test Case: Verify that the system can record and review the initial assessment of patients in OPD and IPD, and patient progress over time.

Pre-requisite for test	Test Validation
1. A healthcare provider (nurse or medical practitioner) with authorization to access patient records in both OPD and IPD. **2.** Keep dummy patient registration records available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the OPD module. **Step 2.** Search for a dummy patient record in OPD and select the patient. **Step 3.** Record the initial assessment by filling in required fields such as patient history, symptoms, and initial diagnosis related to antenatal care. **Step 4.** Save the assessment and confirm the system shows a successful submission notification. **Step 5.** Navigate to the patient's record to review the initial assessment entry for completeness and accuracy. **Step 6.** Navigate to the re-assessment section for the same patient and update the record with a follow-up examination. **Step 7.** Save the re-assessment and confirm successful submission. **Step 8.** Repeat Steps 2-7 for different patient categories (obstetrics, pediatrics, ophthalmology, ENT) by searching for their respective dummy patient records and completing initial and re-assessments. **Step 9.** Navigate to the IPD module and search for the dummy patient record (assuming the patient is admitted). **Step 10.** Record the initial IPD assessment, including admission details, vitals, and care plan. **Step 11.** Save the IPD assessment and verify the submission is successful.	**1.** The system successfully captures the initial assessment and re-assessment for different patient categories (antenatal, obstetrics, pediatrics, ophthalmology, ENT) in both OPD and IPD. **2.** The healthcare provider can retrieve and review the assessments. **3.** Patient progress notes are saved and displayed correctly, showing chronological updates across all categories.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 12. Update the patient's progress notes with treatment updates and observations for antenatal care. **Step 13.** Review the patient's progress history and confirm that the system displays all previous updates accurately and in chronological order. **Step 14.** Repeat Steps 9-13 for different patient categories (obstetrics, pediatrics, ophthalmology, ENT) by searching for their respective dummy patient records and completing their IPD assessments and progress updates.		

COP.1. The system manages consultation services in OPD and IPD.		
COP.1.b: The system provides a summary of the patient's condition, medication order, and follow-up visit for OPD visit.		
Test Case: Verify that the system can generate a concise overview of a patient's health condition, and manage medication orders, and follow-up visits.		
Pre-requisite for test		**Test Validation**
1. A healthcare provider with authorization to access and manage patient records. **2.** Dummy patient records are created in the system and all the relevant information should be available. **3.** Historical data, including medical history, current symptoms, and previous diagnoses, is available in the system for the dummy patient. **4.** Follow-up visit of a dummy patient is already scheduled and saved in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1: Select a dummy patient from the system (either OPD or IPD). **Step 2.** Navigate to the patient summary or health overview module. **Step 3.** Generate and review a concise summary of the patient's health condition, including key details such as medical history, current diagnosis, and ongoing treatments.	**1.** The system accurately provides a concise overview of the patient's health condition, summarizing medical history, symptoms,	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 4. Verify that the summary is accurate and complete by cross-checking it with the patient's records. **Step 5.** Navigate to the medication orders module. **Step 6.** Create, modify, and save medication orders for the patient, ensuring the system supports order entry for various drug types (e.g., oral, injectable). **Step 7.** Verify that the medication orders are correctly recorded by reviewing the patient's medication list and checking for any alerts or warnings. **Step 8.** Navigate to the follow-up visit scheduling module. **Step 9.** Schedule a follow-up visits for the patient, specifying the date, time, and department. **Step 10.** Verify that the follow-up visit is accurately scheduled by checking the appointment calendar and patient record.	diagnosis, and examination findings. **2.** The system accurately provides a concise overview of the medication order for the patient. **3.** The system accurately provides a concise overview of the follow-up visit for the patient.	

COP.1. The system manages consultation services in OPD and IPD.	
COP.1.c: The system creates order sets based on frequently prescribed medications.	
Test Case: Verify that the hospital system provides a platform where medical practitioners can view commonly prescribed medications and are able to create order sets and allow them to modify it.	
Pre-requisite for test	**Test Validation**
1. The medical practitioner with authorization to view medication databases and create order sets should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the order management section. **Step 2.** Select an order type (e.g., medication, radiology, laboratory). **Step 3.** Choose a specific order to review from the available list. **Step 4.** Access and review the detailed information for the selected order.	**1.** The system provides detailed information on medication, and diagnostic test orders assigned patient to healthcare providers.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Confirm that the list includes commonly used medications by cross-checking with real-time information. **Step 6.** Select medications from the list and create a new order set. **Step 7.** Choose medications from the system to include in the custom order set. **Step 8.** Modify the order set by adding or removing medications or modifying some content of the order set such as dosages, or frequencies based on individual patient needs. **Step 9.** Save the modified order set and verify that the changes are accurately reflected.	**2.** Medical practitioners can create, edit, and personalize order sets using pre-established templates based on individual patient needs.	

COP.1. The system manages consultation services in OPD and IPD.		
COP.1.d: The system provides details of the medications, radiology, and diagnostics.		
Test Case: Verify that the system enables healthcare providers to access detailed information about various types of orders, including medication, radiology, and laboratory orders etc.		
Pre-requisite for test		**Test Validation**
1. Healthcare provider with authorization to access different orders should be logged into the system. **2.** Sample data of dummy patients for medications, radiology, and laboratory orders populated in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 5. Navigate to the order management section. **Step 2.** Select an order type (e.g., medication, radiology, laboratory). **Step 3.** Choose a specific order to review from the available list. **Step 4.** Access and review the detailed information for the selected order.	**1.** The system provides detailed information on medication, and diagnostic test orders assigned patient to healthcare providers.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Verify that all relevant details (e.g., order status, patient information, order specifics) are accurately displayed. **Step 6.** Ensure that the system provides options to view additional details or historical data as needed.	**2.** When the user selects a specific medication or diagnostic test order comprehensive details such as date and time, type, dosage, and specific instructions should be displayed as applicable.	

COP.1. The system manages consultation services in OPD and IPD.	
COP.1.e: The system has the capability to capture the digital signatures of treating medical practitioners.	
Test Case: Verify that the hospital system accurately captures the digital signatures of medical practitioners on patient records.	
Pre-requisite for test	**Test Validation**
1. Healthcare provider with authorization to sign patient records should be logged into the system. **2.** Digital signature methods such as biometric authentication, OTP, and digital signature keys are properly configured and available within the system. **3.** Keep dummy patient records available in the system that need to be signed such as prescriptions, lab reports, and discharge summaries.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient record section from the dashboard. **Step 2.** Select a dummy patient record that requires a signature. **Step 3.** Initiate the signature process by using one of the available mechanisms to digitally sign on the patient record (e.g., stylus, touchpad).	**1.** The system allows authorized medical practitioners to securely capture digital signatures on various patient records.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 4. Capture the digital signature using the provided interface. **Step 5.** Submit the digital signature and save the changes to the patient record. **Step 6.** Verify that the digital signature appears accurately on the patient record. **Step 7.** Check that the signature timestamp, practitioner's name, and credentials are accurately recorded in the audit trail or system.	**2.** Digital signature methods (biometric authentication, OTP, digital signature keys, etc) are available and functioning correctly. **3.** The system is capable of recording a timestamp for the signature and saving it in the audit trail.	

COP.1. The system manages consultation services in OPD and IPD.		
COP.1.f: The system has the capability to generate Computerized Provider Order Entry (CPOE) for laboratory tests.		
Test Case: Verify that the system allows medical practitioners to place laboratory orders electronically and integrates seamlessly with patient records for accurate and up-to-date information.		
Pre-requisite for test		**Test Validation**
1. Healthcare provider with authorization to place laboratory orders should be logged into the system. **2.** Dummy patient records should be available in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Access the laboratory orders section from the dashboard. **Step 2.** Select the option to place a new laboratory order for a dummy patient. **Step 3.** Choose the appropriate tests and fill in the required details. **Step 4.** Submit the laboratory order electronically.	**1.** The system allows medical practitioners to easily navigate to the laboratory orders section and select patients for whom orders need to be placed.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Verify that the laboratory order is reflected in the patient record. **Step 6.** Check that the order details, including test types and submission dates, are accurately displayed. **Step 7.** Confirm that the order status updates in real time as it progresses through the system. **Step 8.** Review integration with other system modules to ensure that the laboratory order information is consistent across the patient record.	**2.** Medical practitioners can choose from a comprehensive catalog of available laboratory tests and specify any necessary details for each test. **3.** Laboratory orders are seamlessly linked with patient records, ensuring accuracy and accessibility of information. **4.** Submitted laboratory orders are successfully received by the laboratory department.	

COP.1. The system manages consultation services in OPD and IPD.

COP.1.g: The system has the capability to generate Computerized Provider Order Entry (CPOE) for radiological examinations.

Test Case: Verify that the hospital system offers a platform for medical practitioners to electronically place radiology orders for patients.

Pre-requisite for test	Test Validation
1. Healthcare provider with authorization to place radiology test orders should be logged into the system. **2.** Keep dummy patient records should be available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the radiology orders section from the dashboard. **Step 2.** Select the option to create a new radiology order for a dummy patient. **Step 3.** Choose the required radiology tests and enter the necessary details. **Step 4.** Submit the radiology order electronically. **Step 5.** Confirm that the radiology order is visible in the patient's record. **Step 6.** Verify that the order details, including test types and order date, are a **Step 7.** Check that the system confirms order submission and provides status updates.	**1.** The system allows medical practitioners to easily navigate to the radiology orders section and select patients for whom orders need to be placed. **2.** Medical practitioners can choose from a comprehensive catalog of available radiology tests and specify any necessary details for each test. **3.** Submitted radiology orders are successfully received by the radiology department.	Select Yes/No

COP.1. The system manages consultation services in OPD and IPD.

COP.1.h: The system has the capability to generate e-prescription or Computerized Provider Order Entry for medicines.

Test Case 1: Verify that the system allows medical practitioners to electronically prescribe medications to the patient.

Pre-requisite for test	Test Validation
1. Medical practitioner should be logged into the system. **2.** Keep a dummy patient record available in the system and schedule an appointment for a consultation.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Access the "Medication Prescriptions" section from the dashboard. **Step 2.** Select the option to create a new prescription for a dummy patient. **Step 3.** Enter the medication details, including drug name, dosage, and instructions. **Step 4.** Submit the prescription electronically. **Step 5.** Verify that the prescription appears in the dummy patient's record. **Step 6.** Confirm that the medication details, including dosage and instructions, are accurately displayed. **Step 7.** Check that the system provides confirmation of the prescription submission and updates the order status.	**1.** The medical practitioner successfully logs into the e-prescription system. **2.** Prescriptions are accurately captured and stored within the patient's record, ensuring completeness and accessibility.	Select Yes/No

COP.1. The system manages consultation services in OPD and IPD.

COP.1.h: The system has the capability to generate e-prescription or Computerized Provider Order Entry for medicines.

Test Case 2: Verify that the system identifies drug-drug interaction, conflict with patient condition, etc., and provides alerts.

Pre-requisite for test	Test Validation
1. Medical practitioner should be logged into the system. **2.** Patient records are available and up-to-date within the system with some complications with allergies. (For e.g. Allergy 1: Penicillin, Allergy 2: Sulfa drugs)	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Access the medication prescriptions section from the dashboard. **Step 2.** Use the system to search and select a dummy patient record.	**1.** System recommendations or alerts are relevant, actionable, and aligned with established clinical guidelines.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 3. Create or modify a medication prescription, including entering multiple drugs (e.g. (medicine-Bactrim (which contains sulfamethoxazole, a sulfa drug)) for the patient. **Step 4.** Submit the prescription. **Step 5.** Observe if the system identifies any drug-drug interactions or conflicts with existing patient conditions. **Step 6.** Verify that the system provides clear alerts or warnings for any identified interactions or conflicts. **Step 7.** Check that the alerts include relevant details about the interaction or conflict and recommended actions.		

COP.1. The system manages consultation services in OPD and IPD.		
COP.1.i: The system creates order sets (laboratory and diagnostics) based on the patient's diagnosis.		
Test Case: Verify that the system enables the creation of order sets for laboratory and diagnostic tests based on the patient's diagnosis.		
Pre-requisite for test		**Test Validation**
1. Medical practitioners should be logged into the system. **2.** Keep a dummy patient record available in the system who has a specific disease such as kidney disease.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the Lab order section for a dummy patient, **Step 2.** Attempt to assign laboratory tests and radiology tests to the dummy patient. **Step 3.** Verify that the system shows a predefined list (order set) of laboratory tests related to the selected patient's medical condition.	**1.** The system enables medical practitioners to create order sets for laboratory and radiology procedures based on the patient's diagnosis.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 4. Make any necessary additions or removals of specific tests based on the patient's condition and clinical requirements. **Step 5.** Save the laboratory order set in the system. **Step 6.** Repeat steps 2-5, but this time for radiology tests (e.g., ultrasonography) associated with the patient's medical condition. **Step 7.** Save the radiology order set in the system. **Step 8.** Access a patient's medical record from the system. **Step 9.** Check that all laboratory orders and radiology orders are correctly assigned to the dummy patient.	**2.** Predefined order sets relevant to the patient's diagnosis are available within the system for efficient selection.	

COP.1. The system manages consultation services in OPD and IPD.		
COP.1.j: The system allows importing patient-specific information/results for review and comments.		
Test Case: Verify that the system provides a platform for medical practitioners to import and review patient-specific information that is obtained from different departments such as laboratory, radiology/imaging, or other departments.		
Pre-requisite for test		**Test Validation**
1. Medical practitioners should be logged into the system. **2.** Dummy patient-specific data from different service areas is accurately recorded and available in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Access the Patient Information section from the dashboard. **Step 2.** Select the option to import dummy patient-specific information. **Step 3.** Choose the data sources (e.g., visits, laboratory, radiology, etc.). **Step 4.** Import the relevant patient data from selected departments.	**1.** The system provides a platform for medical practitioners to import patient-specific information that is obtained from	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Review the imported information in the dummy patient record. **Step 6.** Add comments to the imported information. **Step 7.** Save the dummy patient's record with the imported data and comments. **Step 8.** Verify that the imported data, along with the comments, can be retrieved and viewed by other authorized users. **Step 9.** Confirm that all relevant details from various departments are accessible and correctly associated with the patient record.	different departments such as laboratory, radiology/imaging, or other equipment or departments.	

COP.1. The system manages consultation services in OPD and IPD.		
COP.1.k: The system notifies treating medical practitioners when placing duplicate orders.		
Test Case: Verify that the system notifies treating medical practitioners when placing a new request for laboratory tests, radiology procedures, pharmacy orders, or other diagnostics procedures if a duplicate request already exists.		
Pre-requisite for test		**Test Validation**
1. Medical practitioners should be logged into the system. **2.** Keep a dummy patient record available in the system with multiple tests (CBC, Chest X-ray, ECG) and a pharmacy order assigned (Amoxicillin 500 mg) to him.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the patient records. **Step 2.** Select a dummy patient from the system to assign a test. **Step 3.** Place a new request for a laboratory test, radiology procedure, pharmacy order, or diagnostic procedure. **Step 4.** Enter another request that exactly matches the details of the above request	**1.** The system should check for existing requests and notify the medical practitioner of any duplicate laboratory tests, radiology procedures,	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Verify that the system detects the duplicate request. **Step 6.** Confirm that the system notifies the medical practitioner of the existing duplicate request. **Step 7.** Review the notification details to ensure accurate and clear information is provided.	pharmacy orders, or diagnostics procedure requests.	

COP.1. The system manages consultation services in OPD and IPD.	
COP.1.I: The system allows patients to access their prescriptions.	
Test Case: Verify that the hospital system provides a platform that is easily accessible by patients for accessing their prescriptions.	
Pre-requisite for test	**Test Validation**
1. Patients with authorization to access prescriptions should be available. **2.** Prescriptions for the patient should be available in a section or designated platform where patients can access prescriptions or medication records.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Log in to the patient portal or designated platform where the patient can access prescriptions or medication records. **Step 2.** Navigate to the Prescriptions section. **Step 3.** Access the list of available prescriptions. **Step 4.** Verify that each prescription detail is displayed. **Step 5.** Confirm that prescription information is up-to-date and accurately reflects current orders. **Step 6.** Test accessibility using various devices. For example, send medications by SMS on a smartphone, send them via email, and view your email on a computer.	**1.** Patients can access and view their prescriptions.	Select Yes/No

COP.1. The system manages consultation services in OPD and IPD.

COP.1.m: The system sends alerts in case of critical test results.

Test Case: Verify that the system sends alerts to relevant staff/departments (e.g., treating medical practitioners, nursing staff, and laboratory personnel) whenever a critical study/test result is available in the laboratory.

Pre-requisite for test	Test Validation
1. Healthcare provider with authorization to access lab module. **2.** The user has appropriate permissions to receive alerts for critical test results. **3.** The system is configured to identify and flag critical test results. **4.** The system has defined staff/departments and their contact information.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the laboratory module **Step 2.** Select a dummy patient from the system for which the test is assigned (For e.g. Blood glucose level). **Step 3.** Enter the test result for Blood Glucose Level as 450 mg/dL for the dummy patient. **Step 4.** Confirm the lab result significantly exceeds or falls below the established normal range, and check that the system identifies the result as critical. **Step 5.** Check that notifications are sent via available mechanisms/channels to the relevant stakeholders. **Step 6.** Check the content of the notifications sent for critical study/critical values accurately. **Step 7.** Check that the system is able to give the trend analysis for ICU /OT /CRITICAL patients, as a delta check based on laboratory test value. **(Optional)**	**1.** The system accurately identifies critical lab values and triggers notification alerts to relevant stakeholders.	Select Yes/No

COP.1. The system manages consultation services in OPD and IPD.

COP.1.n: The system allows medical practitioners to access past medical records within the healthcare organization.

Test Case: Verify that the system allows treating or referring medical practitioners to access past medical records of their patients within the hospital.

Pre-requisite for test	Test Validation
1. Test data containing comprehensive medical records for patients is available within the system. 2. Treating or referring medical practitioners should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the Patient Records section. **Step 2.** Search for a dummy patient record by using key identifiers such as patient name, mobile number, UHID, or ABHA number **Step 3.** Select a dummy patient from the search result. **Step 4.** Access the section to view the medical history. **Step 5.** Review both past and most recent medical records. **Step 6.** Verify that all records are accurately displayed and accessible. **Step 7.** Confirm that record details are up-to-date and complete.	1. The system allows access to patient medical records for medical practitioners. 2. Patient records can be retrieved accurately using key identifiers such as patient name, mobile number, UHID, or ABHA number. 3. Medical practitioners can review comprehensive medical records of the patient.	Select Yes/No

COP.1. The system manages consultation services in OPD and IPD.		
COP.1.o: The system has the capability to link patient's health records to their ABHA.		
Test Case: Verified by external certification.		
Pre-requisite for test		**Test Validation**
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External Certification	Confirmation of ABDM certification.	Select Yes/No

COP.1. The system manages consultation services in OPD and IPD.		
COP.1.p: The system provides access to a patient's past medical records through ABHA.		
Test Case: Verified by external certification.		
Pre-requisite for test		**Test Validation**
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External Certification	Confirmation of ABDM certification.	Select Yes/No

COP.2. The system manages nursing care processes.
COP.2.a: The system captures nursing notes for inpatients.
Test Case: Verify that the system allows nurses to create digital IPD (In-Patient Department) nursing notes.

Pre-requisite for test	Test Validation
1. Nurse with authorization to manage nursing notes should be logged into the system. **2.** A dummy patient should be admitted with a nurse's care in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Access the nursing notes section from the dashboard. **Step 2.** Select the option to create a new IPD nursing note for a dummy patient. **Step 3.** Enter details into the digital note interface such as the timestamp of the entry, patient particulars (e.g., name, ID), nurse identification information (e.g., nurse's name, ID), an overview of the patient's condition, clinical findings, significant events during the shift, observations regarding the patient's response to care or progression. **Step 4.** Save the nursing note. **Step 5.** Verify that the nursing note is accurately recorded and visible in the dummy patient's IPD record.	**1.** Nurses can create new nursing notes, documenting essential details about patient care and condition. **2.** Existing nursing notes are accessible to nurses for review.	Select Yes/No

COP.2. The system manages nursing care processes.
COP.2.b: The system facilitates digital handover between medical practitioners/ nurses during shift changes for inpatients.
Test Case: Verify that the hospital system effectively captures handovers between medical practitioners/ nurses during shift changes and maintains records of nursing care plans for all inpatients.

Pre-requisite for test	Test Validation
1. Nurse with authorization to manage nursing notes should be logged into the system. **2.** A dummy patient should be admitted with a nurse's care in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Access the shift handover section from the dashboard. **Step 2.** Initiate a handover entry for the current shift. **Step 3.** Enter details of the handover, including dummy patient-related information such as vital signs, procedures undergone, scheduled diagnostics or procedures for the day, information related to the patient's current condition, recent changes in condition, ongoing treatment, possible changes or complications, and any other relevant information. Additionally, include minimum healthcare worker identification details (employee ID, name, etc.). **Step 4.** Save the handover record. **Step 5.** Navigate to the nursing care plans section. **Step 6.** Review and update nursing care plans for all inpatients. **Step 7.** Verify that all handovers are recorded and accessible. **Step 8.** Confirm that nursing care plans are complete and accurately maintained.	**1.** Healthcare providers can effectively document handover exchanges, ensuring that essential patient-related information is communicated accurately between shifts.	Select Yes/No

COP.3. The system supports blood transfusion services.
COP.3.a: The system maintains records of prospective donors.
Test Case: Verify that the digital donor registration and screening system effectively registers donors, and maintains a comprehensive database of donor information.

Pre-requisite for test	Test Validation
1. Medical practitioners/Administrative staff with authorization to manage blood donor registration should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the blood donor registration section from the dashboard. **Step 2.** Initiate a new donor registration. **Step 3.** Enter donor details, including personal information and screening results. **Step 4.** Submit the registration form. **Step 5.** Verify that the donor is successfully registered and added to the database. **Step 6.** Confirm that the system evaluates the donor against set criteria to identify high-risk donors. **Step 7.** Check that high-risk donors are marked as ineligible in the system. **Step 8.** Access the donor database and confirm that the new entry is accurately reflected, including any ineligibility status. **Step 9.** Check the system's ability to retrieve and display donor information, including identifying and managing high-risk donors.	**1.** Healthcare staff can register new blood donors and input relevant donor information into the system. **2.** The system can screen potential donors based on predefined criteria, identifying high-risk donors and ensuring the safety of blood transfusion procedures. **3.** Screening results are recorded and stored within the system for future reference and monitoring.	Select Yes/No

COP.3. The system supports blood transfusion services.	
COP.3.b: The system should support the calculation of turnaround time.	
Test Case: Verify that the system accurately calculates the turnaround time for blood component requests, including capturing start and end times, sub-activities, and reasons for delays.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff with authorization to access the digital blood bank management system module be logged into the system. **2.** Keep a dummy patient record available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the system's blood bank module where blood component requests are generated and processed. **Step 2.** Generate a new request for a blood component (e.g., packed red blood cells, plasma) for a dummy patient. **Step 3.** Check the system records the start time automatically when the request is submitted. **Step 4.** Document any sub-activities involved in processing the request, such as blood typing, cross-matching, and reservation. **Step 5.** Mark the request as completed when the blood component is cross-matched/reserved and available for transfusion. **Step 6.** Ensure the system records the end time automatically when the process is finalized. **Step 7.** Confirm that the system automatically calculates the total turnaround time. **Step 8.** Review the calculated TAT to ensure it accurately reflects the time taken for the entire process. **Step 9.** If there is a delay in processing the request, enter the reason for the delay as per the organization's policy. **Step 10.** Verify that the system prompts for a reason and logs it appropriately.	**1.** The system can capture start and end times, sub-activities, and reasons for delays to record turnaround time for blood component requests.	Select Yes/No

COP.3. The system supports blood transfusion services.
COP.3.c: The system manages the stock of blood and blood components.
Test Case: Verify that the digital blood transfusion management module monitors the availability of blood and blood component units, facilitates timely requisition and dispatch of blood units, and ensures accurate tracking of blood inventory.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to access the digital blood transfusion management system module be logged into the system. 2. Both the requester and approver should be logged in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the blood inventory management section from the dashboard. **Step 2.** Review the current inventory of blood and blood components. **Step 3.** Initiate a requisition for blood units. **Step 4.** Verify that the requisition process accurately updates the inventory and generates a dispatch request. **Step 5.** Monitor the status of the requisition and ensure timely dispatch of blood units. **Step 6.** Confirm that the system accurately tracks and updates blood inventory levels. **Step 7.** Check that the system can generate an inventory report that includes details such as blood discarded as per the blood discard policy of the healthcare organization **Step 8.** Review inventory reports to ensure accuracy and completeness. **Step 9.** Create a scenario in which one of the blood components is nearing its expiration. **Step 10.** Check that the system generates alerts for blood components nearing expiry.	1. Blood bank management functionalities, including monitoring, verification of requisitions, dispatch management, and alert generation, are accessible. 2. Real-time information on blood supply availability is accurately displayed within the system. 3. The system should display alert messages for expired blood units, or other inventory management issues.	Select Yes/No

COP.3. The system supports blood transfusion services.

COP.3.d: The system supports safe transfusion of blood/blood components and captures blood transfusion-related incidents.

Test Case: Verify that the system effectively captures and maintains digital records of blood transfusion-related incidents.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to maintain digital records of blood transfusion-related incidents should be logged into the system. 2. Incident reporting systems for hemovigilance are implemented and accessible.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section designated for documenting blood transfusion-related incidents. **Step 2.** Select the option to report a new blood transfusion-related incident. **Step 3.** Enter detailed information about the incident, including dummy patient details, incident type, and any relevant notes. **Step 4.** Submit the incident report and confirm that it is accurately recorded in the system. **Step 5.** Review the incident record to ensure all details are complete and correctly documented. **Step 6.** Verify that the record is accessible and can be updated as necessary. **Step 7.** Select an option to generate an incident report and check that the system is able to generate an incident report for analysis and onward submission to hemovigilance. **Step 8.** Review the generated report containing all the information related blood transfusion incident	**1.** Authorized users can accurately record incidents, capturing all pertinent details for thorough documentation. **2.** Incident records are stored within the system and are readily accessible for analysis and review. **3.** The system is capable of generating an incident report for analysis.	Select Yes/No

COP.3. The system supports blood transfusion services
COP.3.e: The system has the capability to check bloodstock information through the Unified Health Interface.
Test Case: Verify that the system can access and share real-time bloodstock information through the Unified Health Interface (UHI) platform.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to blood bank stock management should be logged into the system. **2.** The Blood Bank Information System is integrated with the UHI system. **3.** Real-time updates on blood bank stock levels are configured to be shared through the UHI platform.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the blood bank management section. **Step 2.** Access the blood bank-related information from the system. **Step 3.** Enter a query to check the current bloodstock levels in your healthcare organization. **Step 4.** Check that the system successfully sends this query to the UHI platform. **Step 5.** Verify that the system retrieves real-time bloodstock information from the UHI platform. **Step 6.** Check that the data includes detailed information such as blood type, quantity, and expiration dates. **Step 7.** Select a different healthcare facility within the UHI network. **Step 8.** Submit a request to view their bloodstock levels. **Step 9.** Confirm that the system retrieves and displays the bloodstock information from the selected facility. **Step 10.** Update your blood bank's stock levels in the system and ensure that this update is promptly shared with the UHI platform. **Step 11.** Verify that other healthcare providers within the UHI network can access the updated bloodstock information.	**1.** Real-time updates on blood bank stock levels are accurately displayed within the UHI system. **2.** The search functionality allows users to query blood bank stock levels for specific blood types or components. **3.** The UHI system enables the sharing of blood bank stock information with other healthcare providers or facilities.	Select Yes/No

COP.4. The system manages emergency and medico-legal cases.
COP.4.a: The system manages registration and record maintenance of patients in emergency department.
Test Case: Verify the functionality and effectiveness of the digital emergency registration functionality to enable quick registration and retrieval of patient information during urgent situations.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to emergency registration module should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the Emergency Registration section. **Step 2.** Initiate a new emergency registration. **Step 3.** Enter dummy patient details into the registration form. **Step 4.** Submit the registration and confirm that the system processes the information promptly. **Step 5.** Retrieve the newly registered dummy patient information from the emergency system using identifiers such as name, patient ID, and unique emergency numbers. **Step 6.** Check the system's capability to update and modify patient records during emergencies. **Step 7.** Stimulate a scenario in which the patient is discharged from the emergency department but doesn't feel well for some reason. **Step 8.** Check that the system captures the readmission details of the patient upon re-admission to the emergency ward within 72 hrs.	**1.** The digital emergency registration system should enable swift and accurate registration of patients during emergencies. **2.** Patient information entered into the system should be saved accurately and retrievable without delay. **3.** Existing patient records should be readily accessible within the system. **4.** The system can capture the readmission details of the patient.	Select Yes/No

COP.4. The system manages emergency and medico-legal cases.
COP.4.b: The system has the capability to label a case as a medico-legal case (MLC).
Test Case: Verify that the system effectively assists the hospital in labeling a case as a medico-legal case by providing necessary features for collecting and recording accurate and efficient information using a digital checklist.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to access and modify health records should be logged into the system. **2.** A dummy patient with relevant information should be available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the functionality for labeling the case as medico-legal. **Step 2.** Select a dummy patient that needs to be marked as MLC. **Step 3.** Begin the process of labeling a case as medico-legal within the system. (Checkbox, radio button, indicator, etc.) **Step 4.** Check that the system prompts for necessary information to be collected and recorded for the medico-legal case. **Step 5.** Ensure that the system provides access to a digital checklist/list to guide the collection of required data. **Step 6.** Use the digital checklist/list provided by the system to collect relevant information for the medico-legal case. **Step 7.** Enter the information as per the checklist/list. **Step 8.** Check that all necessary data fields are available and accessible within the checklist for comprehensive documentation. **Step 9.** Verify that all information collected for the medico-legal case is stored in the hospital's medical record system.	**1.** The system provides functionality to label a case as a medico-legal case. **2.** Patient records accurately reflect the labeling of cases as medico-legal cases, ensuring comprehensive documentation and appropriate handling of such cases within the healthcare organization.	Select Yes/No

COP.4. The system manages emergency and medico-legal cases.
COP.4.c: The system supports monitoring and transmission of patient information from the ambulance to the emergency department.
Test Case: Verify that the system effectively supports the integration of patient-centric information from hospital ambulances to the hospital's emergency department, including the transmission of vitals recorded by smart ambulances.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to integrate patient-centric information from healthcare organization's ambulances should be logged into the system. **2.** Test data, including simulated patient vital signs, is available for testing purposes. **3.** Hospital ambulance systems should be integrated with hospital EMR systems and capable of transmitting patient vitals to the hospital's emergency department in real time.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Access the emergency department interface. **Step 2.** Initiate a data integration session with the ambulance system. **Step 3.** Verify that patient information from the ambulance is transmitted to the emergency department. **Step 4.** Check that vitals recorded by the smart ambulance (such as heart rate, blood pressure, oxygen saturation, and ECG data, if available) are accurately transmitted and displayed. **Step 5.** Confirm that the transmitted data is integrated into the patient's record in the emergency department system. **Step 6.** Review the patient information and vitals to ensure completeness and accuracy.	**1.** Patient vital sign data from hospital ambulances should be seamlessly transmitted to the healthcare organization's emergency department. **2.** The emergency department system should receive accurately and display the patient data in real-time without delays.	Select Yes/No

COP.4. The system manages emergency and medico-legal cases.
COP.4.d: The system has the capability to capture emergency codes and staff response.
Test Case: Verify that the system activates the emergency codes and captures staff response.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to activate emergency codes and manage emergency procedures should be logged into the system. **2.** Lists of stakeholders to be informed for each emergency code are defined and up-to-date.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Access the emergency codes section from the dashboard. **Step 2.** Select and activate a specific emergency code (like Code Red, Yellow, Blue, and Grey within the system). **Step 3.** Verify that the system triggers the appropriate alerts and notifications as per a defined protocol. **Step 4.** Capture staff responses to the activated emergency code. **Step 5.** Confirm that the staff responses are accurately recorded and associated with the emergency code. **Step 6.** Review the activation logs and staff response data for completeness and accuracy.	**1.** Relevant stakeholders are promptly notified through the configured channels upon activation of each emergency code. **2.** System should be able to log the action related to the emergency code into the log.	Select Yes/No

COP.5. The system supports Intensive care services.
COP.5.a: The system supports the rational use of intensive care services by adopting appropriate admission and discharge criteria.
Test Case: Verify that the system enforces evidence-based criteria for the rational use of ICU resources, optimizing patient outcomes and resource allocation.

Pre-requisite for test	Test Validation
1. Healthcare providers with authorization to manage the ICU admission and discharge should be logged into the system. **2.** Keep dummy patient records available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the ICU admission and discharge criteria section. **Step 2.** Select a dummy patient requiring potential ICU admission. **Step 3.** Apply the evidence-based criteria provided in Annexure XXX to determine if the patient qualifies for ICU admission. **Step 4.** Verify that the system correctly flags the patient as eligible or ineligible based on the criteria. **Step 5.** Record the system's decision to admit or not admit the patient to the ICU. **Step 6.** Ensure the reasoning behind the decision is clearly documented in the patient's record. **Step 7.** Select a dummy patient currently in the ICU who is being considered for discharge. **Step 8.** Apply the evidence-based discharge criteria provided in Annexure XXX to assess if the patient is ready for discharge. **Step 9.** Confirm that the system accurately assesses and flags the patient's eligibility for discharge. **Step 10.** Record the system's decision to discharge or retain the patient in the ICU. **Step 11.** Ensure the system logs the criteria met or not met for the discharge decision.	**1.** The system can provide potential decisions regarding patient ICU admission based on evidence-based criteria. **2.** The system can provide potential decisions regarding patient discharge based on evidence-based criteria.	Select Yes/No

COP.5. The system supports Intensive care services.
COP.5.b: The system supports risk assessment and outcomes of patients.
Test Case: Verify that the system accurately calculates predicted mortality rates using validated scales for patients admitted to the Intensive care unit.

Pre-requisite for test	Test Validation
1. Healthcare providers with authorization to manage the risk assessment section of the system for ICU patients should be logged into the system. **2.** keep dummy patient details available at the time of testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the risk assessment section of the system for ICU patients. **Step 2.** Choose an appropriate mortality prediction scale (e.g., APACHE, SOFA, SAPS, MPM, PRISM) based on the patient's age and condition. **Step 3.** Enter relevant dummy patient data into the scale. **Step 4.** Ensure the system accurately calculates the predicted mortality rate using the selected scale. **Step 5.** Record the patient's outcome, such as discharge, transfer, re-admission, or death, within the system. **Step 6.** If the patient is re-admitted, ensure the system accurately captures and records the time difference between the original discharge/transfer and the re-admission. **Step 7.** Verify that the system flags or alerts based on the re-admission time frame as per clinical guidelines. **Step 8.** Generate a report summarizing the patient's risk assessment, predicted mortality rate, and outcome. **Step 9.** Confirm that all data is accurately represented in the report and that re-admission times are correctly calculated and displayed	**1.** The system should be integrated with a mortality prediction scale (e.g., APACHE, SOFA, SAPS, MPM, PRISM). **2.** The system can calculate the mortality rate based on the patient's age and condition.	Select Yes/No

COP.5. The system supports Intensive care services.
COP.5.c: The system supports the integration of patient care data from monitoring devices.
Test Case: Verify that the system accurately integrates real-time data from patient monitoring devices into the patient's digital health record.

Pre-requisite for test	Test Validation
1. Healthcare providers with authorization to manage patient records should be logged into the system. **2.** Various patient monitoring devices (e.g., vital sign monitors) should be integrated into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Connect various patient monitoring devices (e.g., vital sign monitors) to the system. **Step 2.** Check that the devices are recognized by the system and establish a stable connection. **Step 3.** Check the patient's vital signs using connected devices (e.g., heart rate, blood pressure, oxygen saturation). **Step 4.** Confirm that the data is automatically and accurately transferred to the patient's digital health record in real-time. **Step 5.** Cross-check the data transferred from the monitoring devices against the device's original readings to ensure accuracy. **Step 6.** Verify that no data discrepancies or errors occur during the transfer process.	**1.** The system should integrate real-time data from patient monitoring devices into the system.	Select Yes/No

COP.5. The system supports Intensive care services.
COP.5.d: The system supports the capture of various services provided as a part of patient care.
Test Case: Verify that the system effectively captures and documents various healthcare services provided as part of patient care.

Pre-requisite for test	Test Validation
1. Healthcare providers with authorization to manage patient care service modules should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the ICU care section where patient care services are recorded. **Step 2.** Select a dummy patient from the system. **Step 3.** Log the amount of fluids and nutrients consumed by the patient (input). and document the excreted fluids (output). **Step 4.** Verify that the system accurately calculates and displays the patient's fluid balance. **Step 5.** Select a relevant care bundle (e.g., infection prevention). **Step 6.** Document each step in the care bundle, such as catheter removal and maintenance of sterile techniques. **Step 7.** Ensure the system tracks and confirms adherence to all components of the care bundle. **Step 8.** Enter details of the patient's regular repositioning schedule. **Step 9.** Record each instance of the patient being repositioned. **Step 10.** Verify that the system logs the time, frequency, and type of position change accurately. **Step 11.** Ensure that all recorded healthcare services, including input-output data, care bundle adherence, and position changes, are correctly stored in the patient's record. **Step 12.** Generate a report summarizing the documented care services. **Step 13.** Review the report for accuracy and completeness.	**1.** The system should be capable of capturing and documenting various healthcare services provided as part of patient care.	Select Yes/No

COP.6. The system has the capability to record the surgical/ procedure safety checklist in operating rooms/wards/OPD.
COP.6.a: The system records procedure/ surgical safety checklist in operating rooms/wards/OPD.
Test Case: Verify that the system effectively facilitates the recording of a detailed procedure/surgical safety checklist in operating rooms/wards/OPD.

Pre-requisite for test		Test Validation
1. Healthcare staff with authorization to manage procedure/surgical safety checklists should be logged into the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the operating room interface and access the surgical safety checklist section. **Step 2.** Select the option to create or access a new checklist. **Step 3.** Complete the checklist by entering detailed safety information and steps. **Step 4.** Save the completed checklist. **Step 5.** Verify that the checklist is accurately recorded and stored in the system. **Step 6.** Review the saved checklist to ensure all required details are included and correctly documented.	**1.** The digital system provides access to record a comprehensive surgical safety checklist tailored for the patient based on selected surgery.	Select Yes/No

COP.6. The system has the capability to record the surgical/ procedure safety checklist in operating rooms/wards/OPD.
COP.6.b: The system captures notes related to pre-operative assessment and patient preparation for surgeries.
Test Case: Verify that the system effectively captures and records pre-operative assessment and preparation details of patients for surgeries.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to enter pre-operative assessment details should be logged into the system. **2.** Keep a dummy patient registered in the system whose surgery is scheduled.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Access the pre-operative assessment section from the dashboard. **Step 2.** Select the dummy patient scheduled for surgery. **Step 3.** Enter detailed pre-operative assessment information, including medical history, vitals, and preparation steps. **Step 4.** Submit and save the pre-operative assessment. **Step 5.** Verify that the system accurately captures and records the assessment and preparation details. **Step 6.** Review the recorded information to ensure completeness and accuracy.	**1.** The digital system captures detailed pre-operative assessment including information on medical history, current medications, lab results, and any relevant medical conditions. and patient-centric data accurately.	Select Yes/No

COP.6. The system has the capability to record the surgical/ procedure safety checklist in operating rooms/wards/OPD.

COP.6.c: The system maintains records of patient consent.

Test Case: Verify that the system allows digital Capture and Recording of Patient Consent.

Pre-requisite for test	Test Validation
1. User roles and permissions are configured to access and manage patient consent records. **2.** The dummy patient's profile is available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Access the patient consent section from the dashboard. **Step 2.** Select the relevant dummy patient record requiring consent. **Step 3.** Select an option to record consent for a specific healthcare activity (e.g., treatment, procedure, information sharing). **Step 4.** Record the type of consent being obtained (e.g., treatment, procedure, research).	**1.** The system allows recording patient consent for various healthcare activities. **2.** The system prompts for legal guardian consent for minors or disabled patients	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Simulate a scenario in which the patient is a minor or has a disability and is required to sign a consent form. **Step 6.** If the patient is a minor or has a disability, the system should prompt for legal guardian consent. **Step 7.** Enter the legal guardian's details and capture consent. **Step 8.** Choose the authentication method (e.g., Aadhar-based OTP, fingerprint). **Step 9.** Complete the authentication process by entering the OTP or capturing the fingerprint of the patient/kin/legal guardian. **Step 10.** Retrieve patient records from the system and check that the system stores the consent record in the patient's profile. **Step 11.** Verify that the system marks the consent as belonging to a minor or disabled patient, if applicable.accuracy.	and correctly stores the information. **3.** The consent authentication process is completed successfully using Aadhar-based OTP or fingerprints. **4.** The system marks consent records accurately, especially for minors or disabled patients.	

COP.6. The system has the capability to record the surgical/ procedure safety checklist in operating rooms/wards/OPD.	
COP.6.d: The system schedules, re-schedules, or cancels interventional procedures/ surgeries.	
Test Case: Verify the system's capability to schedule, reschedule, or cancel surgeries with real-time OT availability and department notifications.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff with authorization to schedule procedures/surgeries should be logged into the system. **2.** Keep a record of a dummy patient who requires surgery. **3.** Relevant departments (laboratory, radiology, dietary) are integrated with the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the OT scheduling module **Step 2.** Select a dummy patient, check available OT slots, and book an available OT slot for the selected surgery. **Step 3.** Mark the surgery as planned. **Step 4:** Check that the system notifies the relevant departments (e.g., laboratory, radiology, dietary) about the scheduled procedure. **(Optional)** **Step 5.** Check if the system prompts nurses and billing staff to complete preoperative workups and OT clearances. **Step 6.** Select an already scheduled surgery and reschedule it to a different time or date. **Step 7.** Verify that the system captures the duration of the delay and updates relevant department notifications. **Step 8.** Schedule a second surgery for a patient (UHID) within 30 days of a previous surgery. **Step 9.** Ensure the system flags the patient's UHID and prompts to mark the surgery as planned or unplanned. **Step 10.** Select a scheduled surgery and cancel the booking. **Step 11.** Verify that the system updates OT availability and sends cancellation notifications to relevant departments. **Step 12.** Check that the system is able to send cancellation notifications to relevant departments. **(Optional)**	**1.** The system displays real-time OT availability and allows seamless scheduling of surgeries. **2.** Relevant departments are notified of upcoming procedures, and nurses and billing staff are prompted to complete necessary clearances. **3.** The system captures the duration of any delays when rescheduling surgeries and updates department notifications accordingly. **4.** The system flags any patient undergoing a second surgery within 30 days and prompts for marking the surgery as planned or unplanned. **5.** Cancellations are processed efficiently, with OT availability updated and departments notified.	Select Yes/No

COP.6. The system has the capability to record the surgical/ procedure safety checklist in operating rooms/wards/OPD.
COP.6.e: The system records the start and end times of the planned operation.
Test Case: Verify that the system records the start and end times of surgeries or operations.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to record the operation start and end times should be logged into the system. **2.** Keep a dummy patient registered into the system whose operation/surgery schedule is available at the time of testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the surgery management section from the dashboard. **Step 2.** Select a scheduled surgery or operation. **Step 3.** Initiate the surgery and record the start time within the system. **Step 4.** Monitor the surgery process, and once completed, record the end time in the system. **Step 5.** Submit and verify that both the start and end times are accurately captured and saved. **Step 6.** Review the surgery logs to ensure that the recorded times are correct and complete.	**1.** The system provides a functionality for capturing operation start and end times.	Select Yes/No

COP.6. The system has the capability to record the surgical/ procedure safety checklist in operating rooms/wards/OPD.
COP.6.f: The system records the necessary details of the anaesthesia/procedural sedation administered.
Test Case: Verify that the system accurately records and maintains all necessary details of anesthesia/procedural sedation administered to patients.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to maintain digital records of anesthesia/procedural sedation administered to patients should be logged into the system. **2.** Keep a dummy patient registered in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the anesthesia/procedural sedation documentation section. **Step 2.** Select a dummy patient from the system. **Step 3.** Enter pre-anesthesia and pre-induction assessment details, including patient history, physical examination, and any identified risk factors. **Step 4.** Choose the type of anesthesia administered (e.g., local, regional, spinal, general) from the system's dropdown menu. **Step 5.** Record intra-operative monitoring data at regular intervals, including temperature, heart rate, cardiac rhythm, respiratory rate, blood pressure, oxygen saturation, and end-tidal carbon dioxide (ETCO2). **Step 6.** Enter the details of the drugs used for procedural sedation, including dosage and administration times. **Step 7.** Document the patient's post-anesthesia/post-sedation status, including monitoring of vital signs and recovery status based on predefined criteria before shifting the patient. **Step 8.** Ensure that all anesthesia and sedation details, including pre-, intra-, and post-operative data, are correctly recorded and stored in the patient's digital record. **Step 9.** Generate a report summarizing the anesthesia/procedural sedation details and verify the accuracy and completeness of the data. **(If applicable)**	**1.** The system maintains digital records of anesthesia/procedural sedation administered to patients accurately.	Select Yes/No

COP.6. The system has the capability to record the surgical/ procedure safety checklist in operating rooms/wards/OPD.
COP.6.g: The system records necessary details for surgical procedures/interventions undertaken.
Test Case: Verify that the system effectively maintains digital records for surgical procedures/interventions.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to maintain digital records of surgical procedures/interventions should be logged into the system. **2.** Keep a dummy patient registered into the system whose operation schedule is available at the time of testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the functionality for maintaining digital records of surgical procedures/ interventions. **Step 2.** Select a dummy patient and simulate a scenario where surgical procedures/interventions are ongoing. **Step 3.** Start the process of recording necessary surgical details of surgical procedures/interventions on a patient. **Step 4.** Enter the necessary surgical details of surgical procedures/interventions accurately into the system. **Step 5.** Verify that the system captures all the relevant details of surgical procedures/interventions undertaken. **Step 6.** Review the recorded details of surgeries/operations for accuracy and completeness.	**1.** The system maintains digital records for surgical procedures and interventions accurately.	Select Yes/No

COP.7. The system manages dietary consultation and specific nutritional therapy.
COP.7.a: The system captures dietary screening, manages dietary consultation, and maintains records where relevant.
Test Case: Verify that the digital system enables the allocation of specific diets to patients.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to manage dietary requirements is logged into the system. **2.** Keep a dummy patient registered in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the diet management section from the dashboard. **Step 2.** Select the dummy patient requiring a specific diet. **Step 3.** Access the dietary screening tool and perform a nutritional assessment using the system's validated screening tools. **Step 4.** Record the results of the dietary screening in the patient's electronic health record (EHR). **Step 5.** Verify that the recorded screening results are accurately saved and retrievable from the patient's EHR. **Step 6.** Initiate a dietary consultation by selecting the option to document a consultation within the patient's record. **Step 7.** Select a diet plan template based on the patient's nutritional needs, including any specific dietary requirements (e.g., low sodium, diabetic), and edit the diet plan as per the patient's health condition and requirements. **Step 8.** Save the dietary consultation and verify that the recommendations are clearly documented and linked to the patient's clinical records. **Step 9.** Review the dummy patient's record to ensure the correct diet plan is displayed and accessible to relevant departments.	**1.** The system allows healthcare providers to enter and update diverse dietary requirements for patients. **2.** Dietary requirements are accurately saved and displayed in the patient's medical record. **3.** Dietary requirements are accurately displayed in the hospital kitchen.	Select Yes/No

COP.7. The system manages dietary consultation and specific nutritional therapy.	
COP.7.b: The system maintains a record of the therapeutic diet given to inpatients.	
Test Case: Verify that the digital system maintains accurate and consistent records of therapeutic diets for inpatient care.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff (nurse, dietitian) with authorization to maintain a record of diverse dietary options is logged into the system. **2.** Keep a dummy patient registered in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the therapeutic diet management section from the dashboard. **Step 2.** Select a dummy patient requiring a therapeutic diet. **Step 3.** Enter or update the therapeutic diet plan based on the patient's specific medical needs. **Step 4.** Save the therapeutic diet information to the patient's digital record. **Step 5.** Verify that the system accurately records and reflects the therapeutic diet in the patient's profile. **Step 6.** Check for updates or modifications to the diet plan and confirm they are accurately reflected in the system.	**1.** The dietician can successfully record the dietary needs, preferences, and allergies in the system. **2.** The prescribed therapeutic diet is saved accurately in the patient's profile. **3.** Healthcare providers can view the dietary recommendations and prescribed therapeutic diet in the patient's profile. **4.** Any updates to the dietary information are reflected in real-time and are accessible to all relevant stakeholders.	Select Yes/No

COP.8. The system tracks and monitors all infection prevention and control-related activities and sentinel events.
COP.8.a: The system captures, monitors, manages, and reports, different types of infection-related incidents.
Test Case: Verify that the system tracks, reports, and manages different types of infection-related incidents individually.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to manage infection-related incidents is logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the infection management section from the dashboard. **Step 2.** Select the option to report a new infection-related incident. **Step 3.** Enter the details of the infection, specifying the type of infection and patient information. **Step 4.** Save and submit the infection incident report. **Step 5.** Verify that the system accurately tracks and records the incident as an individual case. **Step 6.** Access the incident management module and review the recorded infection case. **Step 7.** Ensure the system generates reports specific to the type of infection and facilitates appropriate management actions.	**1.** The infection control nurse can successfully report the infection incident with all required details. **2.** Details of prophylactic medications, observed improvements, and progress are accurately documented and updated in the system.	Select Yes/No

COP.8. The system tracks and monitors all infection prevention and control-related activities and sentinel events.
COP.8.b: The system supports the healthcare organization's antimicrobial usage policy.
Test Case: Verify that the system implements a clearly defined antimicrobial usage policy, available digitally to treating medical practitioners.

Pre-requisite for test	Test Validation
1. A healthcare provider with authorization to manage to access antimicrobial usage is logged into the system. **2.** The antimicrobial usage policy is pre-defined in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Access the antimicrobial usage policy document within the system. **Step 2.** Ensure that the policy includes strategies to optimize indication, selection, dosing, route of administration, duration, and timing of antimicrobial therapy. **Step 3.** Confirm that the antimicrobial usage policy is easily accessible and prominently displayed within the system interface. **Step 4.** Verify that medical practitioners can easily reference the policy document while prescribing antimicrobials, ensuring adherence to the recommended practices. **Step 5.** Simulate a scenario where a medical practitioner prescribes antimicrobial dosage that violates the antimicrobial policy defined by the healthcare organization. **Step 6.** Verify that the system includes an option for healthcare providers to input a reason or justification for prescribing antimicrobial drugs. **Step 7.** Attempt to prescribe antimicrobial drugs to the patient and save the prescription.	**1.** The medical practitioner can access the antimicrobial usage policy without any issues. **2.** The system enforces the requirement to provide a justification for antimicrobial prescriptions. **3.** All prescribed antimicrobials adhere to the policy guidelines for indications, selection, dosing, administration route, duration, and timing. If they do not meet guidelines system should display an alert to the user.	Select Yes/No

COP.8. The system tracks and monitors all infection prevention and control related activities and sentinel events.

COP.8.c: The system captures all patient care incidents and sentinel events.

Test Case: Verify that the system captures and manages patient care incidents and sentinel events digitally.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to incident management is logged into the system. **2.** The system has modules for recording exposure incidents and administering prophylaxis. **3.** Keep a dummy healthcare staff registered in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the incident management section from the dashboard. **Step 2.** Select the option to report a new patient care incident or sentinel event. **Step 3.** Enter detailed information about the incident or event, including patient details and a description of the issue. **Step 4.** Submit the report and ensure it is accurately recorded in the system. **Step 5.** Review the recorded incident or event to verify that all details are captured correctly. **Step 6.** Navigate to the management module to review and track the status of reported incidents and events. **Step 7.** Confirm that the system provides options for follow-up actions and resolution tracking.	**1.** The healthcare staff can successfully report patient care incidents and sentinel events. **2.** The system triggers real-time alerts to relevant employees promptly. **3.** Healthcare employees receiving alerts can access incident details and document response actions.	Select Yes/No

COP.8. The system tracks and monitors all infection prevention and control-related activities and sentinel events.
COP.8.d: The system maintains records of the healthcare organization staff, exposed to any infections at the workplace.
Test Case: Verify that the system effectively captures and maintains digital records of hospital employees exposed to infections (such as HIV, Hepatitis B, and Hepatitis C) during duty hours.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to incident management is logged into the system. **2.** The system has modules for recording exposure incidents and administering prophylaxis. **3.** Keep a dummy healthcare staff registered in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section designated for recording incidents from the dashboard. **Step 2.** Select the option to report a new exposure incident. **Step 3.** Enter detailed information about the exposure, including employee details, infection type, and incident specifics. **Step 4.** Submit the report and ensure the information is accurately recorded in the system. **Step 5.** Verify that the system maintains and updates the digital records of the employee's personal health appropriately. **Step 6.** Check that the system can track exposed employees and generate alerts or notifications for exposure incidents requiring immediate risk assessment and follow-up actions.	**1.** The healthcare administrator can successfully report the exposure incident with all required details. **2.** Administrators can track exposure incidents and prophylaxis records.	Select Yes/No

COP.9. The system supports the risk assessment of patients.

COP.9.a: The system assists the organization to identify vulnerable patients, patients at the risk of fall or developing/worsening of pressure ulcers, or deep vein thrombosis.

Test Case: Verify that the system accurately identifies vulnerable patients to adverse health outcomes, including those at risk of falls, pressure ulcers, and deep vein thrombosis.

Pre-requisite for test	Test Validation
1. A healthcare provider with authorization to manage the patient risk assessment section should be logged into the system. **2.** Keep a dummy patient with known risk factors such as chronic illness, advanced age, or multiple comorbidities available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient risk assessment section. **Step 2.** Choose a dummy patient profile with known risk factors such as chronic illness, advanced age, or multiple comorbidities. **Step 3.** Utilize validated tools (e.g., Braden Scale, EPUAP, NPUAP, and fall risk assessment tools) within the system to assess the patient's risk for pressure ulcers, falls, and deep vein thrombosis. **Step 4.** Review the system-generated scores for each risk assessment tool and ensure they align with expected outcomes based on the patient's profile. **Step 5.** Check if the system generates appropriate alerts and recommendations for healthcare providers based on the identified risks.	**1.** System should be able to do risk assessment based on patient data.	Select Yes/No

COP.10. The system supports patient services in remote settings.

COP.10.a: The system has the capability to offer remote/virtual clinical consultations to patients when needed.

Test Case: Verify that the system effectively supports medical practitioners in offering virtual consultations to patients as required, utilizing various remote/virtual clinical consultation methods.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to conduct virtual consultations is logged into the system. **2.** The system supports multiple channels for virtual consultations (video conferencing, Skype, instant messaging).	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the appointment scheduling section from the dashboard. **Step 2.** Select the option to initiate a new virtual consultation.	**1.** The medical practitioner can successfully schedule a virtual consultation and notify the patient.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 3. Choose the remote consultation method (e.g., video call, chat, phone call). **Step 4.** Enter patient details and schedule the consultation. **Step 5.** Conduct the virtual consultation using the selected method. **Step 6.** Record the consultation details and any follow-up actions in the system. **Step 7.** Verify that the consultation is accurately documented and accessible in the patient's record.	**2.** The virtual consultation is initiated successfully using the chosen channel, and both parties can connect without issues. **3.** The consultation is conducted effectively, covering necessary clinical interactions. **4.** Consultation details are accurately documented in the patient's health record.	

COP.10. The system supports patient services in remote settings.

COP.10.b: The system supports effective homecare services.

Test Case: Verify that the system effectively supports booking, billing, monitoring at-home service delivery, and feedback collection for various healthcare services provided at patients' homes.

Pre-requisite for test	Test Validation
1. The homecare services module is activated and accessible within the HIS/EMR system. **2.** Homecare service offerings, including at-home sample collection, wearable device utilization, physiotherapy, and nursing care, are configured in the system. **3.** Healthcare staff with authorization to access homecare services should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 3. Navigate to the section designated for homecare service management. **Step 2.** Book a new at-home healthcare service by entering patient details and selecting the required service. **Step 3.** Confirm the booking and ensure it is recorded in the system. **Step 4.** Monitor the service delivery status and update as necessary. **Step 5.** Process billing for the at-home service and verify that charges are correctly applied and documented. **Step 6.** Collect and record patient feedback after the service is delivered. **Step 7.** Review the service records to ensure all booking, billing, monitoring, and feedback details are accurately captured.	**1.** The system should support efficient booking of homecare services, allowing for scheduling based on patient preferences. **2.** Invoices generated by the system should accurately reflect the services provided and facilitate seamless billing management. **3.** Service delivery monitoring features should enable real-time tracking of homecare appointments.	Select Yes/No

COP.11. The system manages the assessment and re-assessment of patients availing rehabilitation services.

COP.11.a: The system supports functional assessment and re-assessment of patients who avail of rehabilitation services.

Test Case: Verify that the digital system effectively supports the functional assessment and reassessment of patients availing rehabilitation services.

Pre-requisite for test	Test Validation
1. Medical practitioners should be logged into the system. **2.** Functional assessment scales relevant to each therapy discipline are available and configured in the system. **3.** A dummy patient profile is created in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the Rehabilitation Assessments section. **Step 2.** Select a patient requiring functional assessment or reassessment. **Step 3.** Initiate the functional assessment by entering relevant details and test results. **Step 4.** Submit and save the assessment data. **Step 5.** For reassessment, update the patient's existing assessment with new details as required. **Step 6.** Verify that the system accurately records both initial assessments and subsequent reassessments. **Step 7.** Review the assessment records to ensure all data is complete and correctly documented.	**1.** The system should provide easy access to functional assessment tools relevant to each therapy discipline. **2.** Functional assessments should be conducted accurately and efficiently using the integrated assessment scales. **3.** The system should support modification of treatment plans based on reassessment findings. **4.** Assessment results should be seamlessly integrated into the patient's EMR, ensuring comprehensive documentation.	Select Yes/No

COP.12. The system provides a Clinical Decision Support System.
COP.12.a: The system supports the Clinical Decision Support System (CDSS).
Test Case: Verify the system functionality of the Clinical Decision Support System (CDSS) in improving patient outcomes, reducing medical errors, increasing efficiency in care delivery, enhancing communication between healthcare providers and patients, improving patient satisfaction, and reducing healthcare costs.

Pre-requisite for test	Test Validation
1. Medical practitioners should be logged into the system. 2. Relevant clinical guidelines and best practices should be integrated into the CDSS.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Demonstrate at least 2 different scenarios **Scenario 1.** Description: A physician attempts to prescribe a new medication for a patient. Input: Patient Information: Name: Jane Smith Age: 60 years Diagnosis: Diabetes Drug Prescription Request: New Medication: Metformin (for diabetes) Existing Medication: Simvastatin (for cholesterol) Expected Behavior: The CDSS should detect the potential drug interaction between Metformin and Simvastatin. An alert should be triggered, warning about the risk of myopathy or rhabdomyolysis. The system should suggest an alternative statin or adjust the dosage. **Scenario 2.** Description: A physician attempts to manage the care of a pregnant woman with diabetes. The CDSS should provide dietary recommendations, monitor for potential medication interactions, and offer lifestyle advice to ensure the health and safety of both the mother and the developing fetus. Patient Information: Name: Mary Johnson Age: 32 years Weight: 70 kg	1. The result of the test scenario should be matched with the expected behavior.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Height: 165 cm Body Mass Index (BMI): 25.7 Diagnosis: Gestational Diabetes Pregnancy Stage: 24 weeks Current Medication: Insulin (for diabetes management) Dietary Preferences: A balanced diet with emphasis on low glycemic index foods Allergies: None Likes: Fruits, Vegetables, Lean proteins Dislikes: Spicy foods Expected Behavior: The CDSS should provide a comprehensive management plan, including safe medication usage, dietary recommendations, and lifestyle changes tailored for a pregnant woman with diabetes.		

COP.12. The system provides a Clinical Decision Support System.	
COP.12.b: The system triggers alerts to medical practitioners whenever critical interventions are required.	
Test Case: Verify the system's capability to promptly trigger alerts to healthcare providers based on individual data, ensuring timely and effective interventions for critical situations.	
Pre-requisite for test	**Test Validation**
1. A medical practitioner with authorization to access the alert configuration setting should be logged into the system. 2. Keep a dummy patient record available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Simulate scenarios that trigger potential critical interventions, such as prescribing medications with known interactions or contraindications. **Step 2.** Enter patient data into the system for a dummy patient record, including medication orders, patient allergies, and medical history. **Step 3.** Try to save it in the system and the system should automatically trigger scenarios that match the criteria for critical interventions based on the simulated patient data. **Step 4.** Check and confirm that the system promptly detects and triggers alerts when encountering situations such as duplicate therapy, drug-drug interactions, or allergy conflicts. **Step 5.** Check and confirm that alert notification is clearly visible at the medical practitioner's end. **Step 6.** Review the content of alert notifications triggered by the system. **Step 7.** Check and confirm that alerts provide clear and actionable information, including the nature of the issue, patient details, and recommended actions for healthcare providers.	**1.** The system should promptly generate alerts and notifications for critical scenarios such as duplicate therapy, drug-drug interactions, allergy warnings, and other pertinent issues. **2.** Alerts should be displayed prominently within the HIS/EMR interface. **3.** Alerts should provide clear and concise information regarding the identified issue and recommended actions for resolution.	Select Yes/No

COP.12. The system provides a Clinical Decision Support System.

COP.12.c: The system triggers an alert for notifiable diseases as required by the health department.

Test Case: Verify the system's capability to automatically trigger alerts when a diagnosis or event requiring reporting to another department (Govt) is captured, ensuring timely communication and compliance with regulatory requirements.

Pre-requisite for test	Test Validation
1. Medical practitioner should be logged into the system, **2.** The customized list of notifiable diseases for the specific state/UT is up to date.	Manual+Self Attested

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the regulatory reporting section from the dashboard. **Step 2.** Configure a test scenario with a diagnosis or event that requires reporting to a government department. **Step 3.** Enter or simulate the capture of the specified diagnosis or event in the system E.g. Record a diagnosis of a reportable disease (e.g., dengue fever) in the patient's medical record. **Step 4.** Verify that the system automatically triggers an alert for the required reporting. **Step 5.** Check that the alert is sent to the appropriate department or regulatory body. **Step 6.** Confirm the alert includes all necessary information for compliance and reporting. **Step 7.** Assess the timeliness and accuracy of the alert to ensure it meets regulatory requirements.	**1.** Whenever a medical practitioner records a diagnosis of a notifiable disease in the patient's medical record, it should automatically generate an alert that is sent to the relevant stakeholder.	Select Yes/No

COP.13. The system has the capability to create care plans.	
COP.13.a: The system has the capability to create customized care plans based on current standards of practice.	
Test Case: Verify the system's capability to create customized care plans for patients.	
Pre-requisite for test	**Test Validation**
1. Medical practitioner should be logged into the system, 2. A dummy patient should be present in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the care plan management section. **Step 2.** Select the option to create a new care plan for a dummy patient. **Step 3.** Enter patient-specific information and clinical details. **Step 4.** Customize the care plan by selecting relevant interventions, goals, and timelines based on the patient's needs. **Step 5.** Save and review the customized care plan to ensure all details are accurately recorded. **Step 6.** Verify that the care plan is accessible in the patient's record and can be updated as needed.	**1.** Medical practitioners should be able to retrieve patient records by using identifiers. **2.** Medical practitioners should be able to create customized care plans.	Select Yes/No

Chapter 3 - Management of Medication (MOM)

MOM.1. The system maintains inventory records for medicines and consumables in the pharmacy.

MOM.1.a: The system has the capability to identify emergency medications and high-risk medications including look-alike and sound-alike medications.

Test Case: Verify that the system correctly tags high alert, look-alike, and sound-alike medications and provides checks to make different strengths of the same medication easily identifiable by the prescribing physician.

Pre-requisite for test	Test Validation
1. Login credentials for authorized physician who can prescribe high-risk medication should be available. 2. Create a dummy patient medical situation where high-risk medication is required for the treatment.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1: Navigate to the medication management module. **Step 2.** Access the medication catalog and identify high-alert, look-alike, and sound-alike (LASA) medications within the system. **Step 3.** Verify that the system correctly tags these medications with appropriate labels or warnings, such as "High Alert" or "LASA," to indicate their risk level. **Step 4.** Review the tagging criteria to ensure that the system accurately distinguishes between LASA medications, including those with similar names or packaging, and assigns appropriate alerts. **Step 5.** Simulate the process of prescribing a high-alert or LASA medication and verify that the system provides an immediate visual or textual alert to the prescribing physician, highlighting the potential risks. **Step 6.** Check if the system requires the prescribing physician to acknowledge the alert before proceeding with the prescription, ensuring that the risk is recognized and considered. **Step 7.** Access the list of available strengths for a specific LASA medication and verify that the system provides clear differentiation between the different strengths, such as distinct colors, font sizes, or additional labels.	1. The system can identify high-alert, look-alike, and sound-alike medications when prescribed by the physician. 2. The system is capable of producing a visual or textual alert for the prescribing physician. 3. The system can highlight medications with different strengths.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 8. Simulate a scenario where a prescribing physician attempts to select a medication with multiple strengths, and verify that the system provides checks to ensure the correct strength is chosen. **Step 9.** Check that the system allows for updates to the tagging criteria or alert mechanisms as new high-alert or LASA medications are identified or as best practices evolve.		

MOM.1. The system maintains inventory records for medicines and consumables in the pharmacy.		
MOM.1.b: The system has the capability to search, track, and maintain inventory records of medicines and consumables in the pharmacy.		
Test Case: Verify the system's capability to efficiently manage medical supplies using an inventory system, including proper grouping and maintenance of inventory records for different categories of medicines.		
Pre-requisite for test		**Test Validation**
1. A healthcare staff authorized to configure and manage inventory data should be logged into the system. **2.** Dummy stock items should be available in the inventory.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the inventory management section. **Step 2.** Verify the system displays predefined categories such as high-risk such as look-alike sound alike (LASA), and emergency medicines. **Step 3.** Ensure each category is clearly defined and distinguishable. **Step 4.** Use the search functionality to locate a specific medication or use a bar code or QR code scanner to scan the code on a specific medicine or consumable. **(Optional for barcode scanner)** **Step 5.** Confirm that the search results display accurate details like medication name, stock quantity, and location.	**1.** The system allows searching for medications. **2.** The system provides detailed information like stock levels and, location of the medicine. **3.** The system adjusts the inventory levels based upon addition/deletion.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 6. Add new medication stock, including batch number, expiration date, and quantity, and assign it to the appropriate category. **Step 7.** Save the changes and confirm that the inventory records are accurately updated. **Step 8.** Retrieve and verify the updated inventory record to ensure all details are correct. **Step 9.** Simulate issuing the same medication and confirm that the system accurately updates the inventory levels. **Step 10.** Review the inventory management dashboard to verify the accurate reflection of inventory levels, categories, and alerts. **Step 11.** Check if the system generates alerts or notifications for critical inventory issues like low stock or approaching expiration dates.		

MOM.1. The system maintains inventory records for medicines and consumables in the pharmacy.
MOM.1.c: The system notifies and alerts the minimum re-order levels of medication to the relevant staff/ departments.
Test Case: Verify that the system can notify relevant stakeholders about minimum re-order levels for medical supplies and alert them when stock levels are low, preventing shortages and ensuring timely reordering.

Pre-requisite for test	Test Validation
1. A healthcare staff authorized to configure inventory data should be logged into the system. **2.** Create a dummy inventory item and save all relevant information in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the inventory management or alert section. **Step 2.** Check the system settings for minimum re-order levels for medical supplies. **Step 3.** Enter re-order values for dummy items in the inventory based on stock availability or historical data. **Step 4.** Save the re-order values and ensure they are properly stored in the system. **Step 5.** Simulate a scenario where stock levels of a medical supply fall below the minimum re-order level. **Step 6.** Check that the system generates an alert or notification for relevant staff/departments, such as inventory managers or procurement teams through the configured alert mechanism. **Step 7.** Check and confirm that the notification includes details about the specific medical supply, current stock level, and re-order requirements. **Step 8.** Check that notifications are sent promptly and received by the designated staff/departments.	**1.** Healthcare staff is able to set re-order levels for inventory items based on historical data or stock availability. **2.** The system sends timely and accurate alerts when stock levels fall below the set re-order.	Select Yes/No

MOM.2. The system supports the process of medication management.

MOM.2.a : The system manages the process of prescribing, indenting, dispensing, and administration of pharmacy orders and maintenance of records.

Test Case: Verify that the system manages process of prescribing, indenting, dispensing, and administration of pharmacy orders and maintenance of records.

Pre-requisite for test	Test Validation
1. Medical practitioner with authorization to access hospital formulary and medication should be logged into the system. **2.** All the relevant information about the dummy drug such as dosage, indications, and potential side effects should be present. **3.** A dummy patient with all the relevant details should be present in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Scenario 1: **Step 1.** Select a dummy patient to prescribe medication. **Step 2.** Select one medication to prescribe and check that the system displays detailed information about the selected medication, including dosage, indications, contraindications, and potential side effects. **Step 3.** Check the system for updates on medication availability and stock levels. **Step 4.** Order one more drug where the medication order level is low/or the drug is out of stock. **Step 5.** Check and confirm that the system provides notifications or alerts when stock levels are low or when medications are unavailable. **Step 6.** Check that the system provides alternative medication suggestions. **Scenario 2:** **Step 1.** Log into the system and check the inventory management features of the system. **Step 2.** Create an indent for medication/s. **Step 3.** Confirm that the system allows the creation of indents. **Step 4.** Confirm that the procurement team receives the indent. **Scenario 3:** **Step 1.** Log into the system and check for outstanding prescriptions for a dummy patient. **Step 2.** Dispense the prescribed medication and check the system allows dispensing. **Step 3.** Confirm that the inventory levels are adjusted post-dispense. **Scenario 4:** **Step 1.** Check that the system provides a view of all pharmacy orders and maintains the record for the same.	**1.** The system provides medical practitioners with easy access to the hospital drug formulary. **2.** The hospital formulary interface displays important information about medications, including updates on availability and stock levels. **3.** Healthcare providers can easily search for particular medications in the formulary. **4.** The administrator should be able to easily track and monitor stock items in the inventory.	Select Yes/No

MOM.2. The system supports the process of medication management.	
MOM.2.b: The system provides a timestamp at the time of dispensing of medication or devices.	
Test Case: Verify that the system accurately transcribes time stamps for dispensing medications and devices across different patient care stations.	
Pre-requisite for test	**Test Validation**
1. Healthcare provider should be logged into the system using valid credentials. **2.** Create a dummy patient medical situation where medication is required for the treatment. **3.** Pharmacist login credentials should be present at the time of testing **4.** A dummy device should be present in the system at the time of testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Scenario 1: **Step 1.** Navigate to the medication dispensing section. **Step 2.** Choose a dummy patient from the system. **Step 3.** Order a specific medication to a selected dummy patient from the selected care station. **Step 4.** Log into the system as a pharmacist and dispense a specific medication to a dummy patient from the pharmacy. **Step 5.** Check and confirm that the system records the timestamp accurately for the dispensing event. **Step 6.** Navigate to another patient care station (e.g., ICU, General Ward, Emergency Room) within the system and repeat the medication dispensing process for a different patient. **Step 7.** Check and confirm that the system records the timestamp accurately for the dispensing event. **Scenario 2:** **Step 1.** Navigate to the section related to the dispensing of devices. **Step 2.** Select a dummy device from the available inventory to dispense.	**1.** The medication management system captures time stamps automatically for medication dispensing events at different patient care stations.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 3. Enter the necessary details for dispensing the dummy device (e.g., patient ID, device type, quantity). **Step 4.** Confirm the dispensing of the device. **Step 5.** Verify that the system generates a timestamp and check the timestamp details to ensure they include the date and time in the appropriate format (e.g., DD/MM/YYYY HH: MM). **Step 6.** Review the dispensing record in the system to confirm that the timestamp is stored correctly and associated with the correct dispensing event. **Step 7.** Test the process by dispensing another device and verifying that a new timestamp is generated accurately.		

MOM.2. The system supports the process of medication management.	
MOM.2.c: The system alerts the prescription of a high-risk medication and has the capability to verify at the time of dispensing.	
Test Case: Verify that the system alerts the prescription of a high-risk medication and verifies at the time of dispensing.	
Pre-requisite for test	**Test Validation**
1. Healthcare provider should be logged into the system using valid credentials. **2.** Create a dummy patient medical situation where medication is required for the treatment. **3.** Pharmacist login credentials should be present at the time of testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the medication prescribing module. **Step 2.** Prescribe a high-risk medication for a dummy patient.	**1.** The prescription of the high-risk medication is properly alerted and verified.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 3. Confirm that the system generates an alert immediately upon the prescription of the high-risk medication, highlighting the potential risks associated with it. **Step 4.** Verify that the system visually tags the high-risk medication in the prescription interface, making it easily identifiable (e.g., with a color-coded label, icon, or highlight). (Optional step) **Step 5.** Review the alert to ensure it includes critical information such as dosage, contraindications, and necessary precautions. **Step 6.** Acknowledge the alert and proceed with the prescription. **Step 7.** Navigate to the medication dispensing module and select the prescribed high-risk medication for dispensing to the dummy patient. **Step 8.** Verify that the system prompts another alert at the time of dispensing, reminding the dispenser of the high-risk nature of the medication. **Step 9.** Check if the system requires confirmation or additional verification by a second pharmacist before allowing the medication to be dispensed as per the policy of the healthcare organization. **Step 10.** Dispense the medication after completing the required verification steps, and confirm that the system records the event with a timestamp and verification details.	**2.** The dispensing event is logged in the system. **3.** The system should visually tag high-risk medications.	

MOM.2. The system supports the process of medication management.
MOM.2.d: The system generates reports of stock inventory.
Test Case: Verify that the system can generate comprehensive stock inventory reports.

Pre-requisite for test	Test Validation
1. A healthcare staff authorized to configure inventory data should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the inventory management module/reports section. **Step 2.** Access the report generation section related to stock inventory. **Step 3.** Select the parameters for the inventory report, such as date range (start and end date), specific categories (e.g., high-risk medicines, emergency supplies), or specific storage locations. **Step 4.** Generate the stock inventory report based on the selected parameters. **Step 5.** Verify that the report includes all relevant details, such as medication names, quantities, batch numbers, expiration dates, and storage locations. **Step 6.** Check that the report accurately reflects the current stock levels and any recent transactions, such as additions, depletions, or reorders. **Step 7.** Export the report in various formats (e.g., PDF, Excel) and verify that the data remains intact and correctly formatted in each format.	**1.** The medication management system allows users to specify parameters for generating inventory evaluation reports. **2.** The system successfully generates the inventory evaluation report based on the selected parameters. **3.** The report provides comprehensive insights into inventory levels, usage patterns, and potential shortages. **4.** Detailed information is included in the report, such as current stock levels, usage trends, and forecasted shortages. **5.** Stock reports should be available for analysis purposes so the hospital can make decisions to improve stock management.	Select Yes/No

MOM.2. The system supports the process of medication management.		
MOM.2.e: The system suggests medication based on the healthcare organization's formulary.		
Test Case: Verify that the system can suggest medications based on the hospital drug formulary.		
Pre-requisite for test		**Test Validation**
1. Medical practitioners should be logged into the system using valid credentials. **2.** Keep a dummy patient record available in the system and schedule an appointment for the consultation.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the medication prescribing module. **Step 2.** Begin entering a new prescription for a dummy patient, and selecting the diagnosis or condition for which the medication is required. **Step 3.** Check that the system automatically suggests medications (based on smart text search) from the hospital formulary relevant to the diagnosis or condition entered. **Step 4.** Select one of the suggested medications and proceed with the prescription process. **Step 5.** Confirm that the system allows you to view detailed information about the suggested medication, such as indications, contraindications, and potential drug interactions. **Step 6.** Simulate a scenario where the prescribed medication is not present in the drug formulary. **Step 7.** Complete the prescription process and check that the system provides the alert that the drug is not present in the hospital drug formulary.	**1.** The system offers medication suggestions based on the hospital formulary. **2.** Additional information about suggested medications is provided to assist medical practitioners in prescribing. **3.** Warnings are displayed if a selected medication is not available or appropriate based on the formulary. **4.** Users are prompted to choose from the suggested medications or manually override the suggestion if needed.	Select Yes/No

MOM.2. The system supports the process of medication management.		
MOM.2.f: The system highlights the drugs and devices sourced from outside the formulary.		
Test Case: Verify that the system can highlight/mark prescriptions for drugs and devices that are not in the hospital formulary for necessary evaluation and record purposes.		
Pre-requisite for test		**Test Validation**
1. Medical practitioners should be logged into the system. **2.** Create a dummy patient in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Scenario 1: **Step 1.** Navigate to the medication prescribing module. **Step 2.** Begin entering a new prescription for a dummy patient, and selecting a medication that is not included in the hospital formulary. **Step 3.** Verify that the system automatically highlights or marks the prescription as a non-formulary drug. **Step 4.** Check if the system displays a prompt or alert to notify the prescriber that the selected medication is not part of the hospital's approved formulary. **Step 5.** Confirm that the system allows the medical practitioner to proceed with the prescription despite the non-formulary status, and provides an option for additional actions such as entering justification or requesting approval. **Step 6.** If required, enter the necessary justification or request approval to proceed with prescribing the non-formulary drug. **Step 7.** Confirm that the system logs the non-formulary drug prescription for record purposes, ensuring it is flagged for future review. **Scenario 2:** **Step 1.** Navigate to the inventory management or procurement module. **Step 2.** Search for a specific medical device within the inventory.	**1.** The system checks medications against the hospital formulary during the prescribing process. **2.** When a medication outside the formulary is selected for prescription, the system highlights or marks the prescription accordingly. **3.** Medical practitioners can proceed with the prescription process while being aware of medications outside the formulary. **4.** Non-formulary medications are flagged.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 3. Verify that the system accurately highlights devices that are sourced from outside the formulary (e.g., with a distinct color, icon, or label). **Step 4.** Select a highlighted device to view detailed information, including the source, reason for being outside the formulary, and any associated risks or considerations. **Step 5.** Attempt to process a procurement request for a highlighted device. **Step 6.** Verify that the system triggers a warning or confirmation message when attempting to procure or use a device sourced from outside the formulary. **Step 7.** Complete the procurement or usage process and verify that the system logs the transaction, noting that the device was sourced from outside the formulary.	**5.** The system should visually highlight the devices sourced from outside the formulary.	

MOM.2. The system supports the process of medication management.	
MOM.2.g: The system records the history of drug allergy/adverse reactions and alerts the prescribing medical practitioner.	
Test Case: Verify that the system notifies medical practitioners of patient allergies while prescribing drugs based on the patient's past medical history.	
Pre-requisite for test	**Test Validation**
1. Medical practitioners should be logged into the system. **2.** Create a dummy patient and medical history that contains a case of allergy to medicine.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Choose a dummy patient from the system for the prescription. **Step 2.** Navigate to the medication order section. **Step 3.** Begin entering a new prescription for the patient and select a medication that has a known cross-reaction or contraindication with one of the dummy patient's documented allergies. **Step 4.** Check that the system automatically generates an alert or notification to warn the medical practitioner about the potential allergic reaction based on the patient's past medical history. **Step 5.** Check if the system provides options for the prescriber to acknowledge the alert, choose an alternative medication, or proceed with the prescription while documenting the reason for overriding the allergy warning. **Step 6.** If an alternative medication is selected, ensure that the system updates the prescription accordingly and removes the allergy alert.	**1.** The system alerts/indicates the medical practitioner of the patient's allergies while prescribing the allergen medicine to the patient.	Select Yes/No

MOM.2. The system supports the process of medication management.	
MOM.2.h: The system facilitates medication reconciliation.	
Test Case: Verify that the system accurately performs medication reconciliation for a patient post-discharge.	
Pre-requisite for test	**Test Validation**
1. Medical practitioner should be logged into the system. **2.** Dummy patient records are available with a pre-admission medication list and in-hospital treatment documentation in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the medication reconciliation section. **Step 2.** Select the discharged dummy patient whose medication reconciliation needs to be performed. **Step 3.** Review the dummy patient's discharge summary and list of medications provided at discharge. **Step 4.** Compare the discharge medications with the patient's pre-discharge medication list. **Step 5.** Identify and resolve any discrepancies or omissions between the two lists. **Step 6.** Update the patient's medication records to reflect the accurate post-discharge regimen. **Step 7.** Save and verify the updated medication list in the patient's record for accuracy.	**1.** Medical practitioner should be able to retrieve patient records by using patient identifiers. **2.** Post-discharge treatment plan is created accurately considering all relevant medications.	Select Yes/No

MOM.2. The system supports the process of medication management.		
MOM.2.i: The system has the capability to notify about the medications or devices nearing expiry date.		
Test Case: Verify that the system notifies relevant staff/departments when medications are nearing the expiry date, facilitating timely disposal and preventing potential medical emergencies.		
Pre-requisite for test		**Test Validation**
1. A healthcare staff authorized to configure inventory data should be logged into the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the inventory management section. **Step 2.** Retrieve a list of medications from the system and select one medication for testing. **Step 3.** Verify that the system is configured to monitor expiry dates and trigger notifications a specified number of days before the actual expiry (e.g., 30 days).	**1.** The medication management system provides an option to set notification thresholds for medication expiry dates.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 4. Simulate a scenario where medications are nearing their expiry dates by adjusting the system date or manually updating the expiry dates in the inventory records. **Step 5.** Check that the system automatically generates alerts or notifications to relevant staff/departments, such as inventory managers, pharmacists, and medical practitioners, regarding the impending expiry. **Step 6.** Check that the notification is sent via the configured channels (e.g., dashboard, emails, or other alert mechanisms) and is received promptly by the designated staff/departments. **Step 7.** Review the content of the notification to ensure it includes critical information, such as the medication name, batch number, quantity, and the exact expiry date.	**2.** Notifications are triggered and sent to relevant staff/departments as medications approach their expiry dates. **3.** Staff/departments receive accurate and timely notifications regarding medications nearing expiry. **4.** Notifications include essential information about medication names, expiry dates, and recommended actions. **5.** The system's notification mechanism operates effectively, contributing to the proactive management of medication expiry and prevention of potential risks associated with expired medications.	Select Yes/No

MOM.2. The system supports the process of medication management.		
MOM.2.j: The system maintains a record of medications or devices that are returned or recalled.		
Test Case: Verify that the system can track medication and device returns and recalls electronically, maintaining accurate records of the reason for return and recall, including potential adverse reactions or quality issues.		
Pre-requisite for test		**Test Validation**
1. A healthcare staff with authorization to manage inventory data should be logged into the system. **2.** Create a dummy inventory item (medication and medical product) and save it in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Scenario 1 **Step 1.** Navigate to the inventory management section. **Step 2.** Access the module or section designated for tracking medication and medical product returns and recalls. **Step 3.** Simulate a scenario where a batch of medication or a medical product is identified for recall due to quality issues or potential adverse reactions. **Step 4.** Initiate the recall process within the system and verify that it prompts for mandatory details such as the reason for the recall, affected batch numbers, and specific quality or safety concerns. **Step 5.** Confirm that the system allows you to record detailed information about the recall, including any reported adverse reactions associated with the product. **Step 6.** Verify that the system generates alerts or notifications to relevant stakeholders, such as pharmacists, inventory managers, and healthcare providers, about the recall, including instructions for action. **Step 7.** Track the progress of the recall within the system, ensuring that it logs all actions taken, such as removing the recalled items from inventory, notifying affected patients, and coordinating the return of products.	**1.** The system allows healthcare staff to initiate and record returns or recalls of medications and medical products. **2.** The reason for each return or recall is accurately recorded and stored in the system. **3.** A comprehensive digital record of returns and recalls is maintained, including reasons, batch numbers, quantities, and dates.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 8. Simulate a scenario where a patient returns a medication due to an adverse reaction, and verify that the system prompts for detailed documentation of the return, including the reason and any associated medical issues. **Step 9.** Confirm that the system updates the inventory records to reflect the return and adjusts stock levels accordingly. **Scenario 2:** **Step 1.** Check that the system maintains accurate records of all returns and recalls, including the date, reason, batch numbers, and any associated adverse reactions or quality issues. **Step 2.** Review the reporting capabilities of the system to verify that it can generate comprehensive reports on all returns and recalls, detailing the reasons, actions taken, and outcomes. **Step 3.** Check that the system provides tools for stakeholders to monitor ongoing recalls and returns, including the status of returned products and any pending actions. **Step 4.** Verify that the audit logs capture all actions related to medication and medical product returns and recalls, ensuring that each step is documented and traceable. **Step 5.** Simulate a follow-up scenario where the recalled or returned product is re-evaluated or replaced, and confirm that the system records the resolution and updates the relevant inventory and patient records.		

MOM.3. The system supports safe administration of medications.
MOM.3.a: The system correctly identifies the patient at the time of medication administration and captures records.
Test Case: Verify that the system has the capability to identify a patient at the point of medication administration.

Pre-requisite for test	Test Validation
1. Login to the system as a nurse or medical practitioner. **2.** Patients and medications have identifiers for identification. **3.** Optional: A barcode scanner/RFID scanner is available and functional. **4.** Keep a dummy patient record available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the medication administration module. **Step 2.** Select a patient from the list of patients scheduled for medication administration. **Step 3.** Verify that the system prompts for patient identification before proceeding with the medication administration process. **Step 4.** Use the system's patient identification methods, such as scanning the barcode, entering a unique patient ID, or using biometric verification. **Step 5.** Confirm that the system accurately identifies the patient by displaying their full name, date of birth, and other relevant identifiers (e.g., medical record number) on the screen.	**1.** The system successfully verifies patient identity by scanning a barcode/RFID or entering the unique identifier.	Select Yes/No

MOM.3. The system supports safe administration of medications.

MOM.3.b: The system has the capability of maintaining an electronic medication administration record (eMAR).

Test Case: Verify that the Medication Administration Record (MAR) system accurately records the administration of drugs using a specific template or popup, capturing dosage, route of administration, date and time, and the administering personnel.

Pre-requisite for test	Test Validation
1. A medical practitioner with authorization to manage the MAR (Medication Administration Record) system should be logged into the system. **2.** Create a dummy patient medical record in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Select a dummy patient from the list of patients scheduled for medication administration. **Step 2.** Navigate to the Medication Administration Record (MAR) module. **Step 3.** Access the medication order for the dummy patient and verify that the system presents a specific template for recording the medication administration. **Step 4.** Review the template to ensure that it includes fields for capturing the dosage, route of administration, date and time, and the administering personnel. **Step 5.** Administer the prescribed medication to the dummy patient, and enter the relevant details into the template, including the exact dosage, the route of administration (e.g., oral, intravenous), and the date and time of administration. **Step 6.** Retrieve the dummy patient MAR record from the system. **Step 7.** Check that the details are accurately recorded and displayed.	**1.** The MAR displays a specific template or popup for recording medication administration details. **2.** The MAR maintains a comprehensive and accurate record of all medication administrations for the selected patient.	Select Yes/No

MOM.3. The system supports safe administration of medications.	
MOM.3.c: The system maintains records of medical implants.	
Test Case: Verify that the system can record details of medical implants, including batch number, serial number, implant and patient identifier, and associated procedure details, ensuring the information is documented in the patient's medical record and discharge summary.	
Pre-requisite for test	**Test Validation**
1. A surgeon or medical practitioner should be logged into the system. **2.** Create a dummy patient scheduled for a procedure involving a medical implant in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient medical record section. **Step 2.** Select a dummy patient from the list whose medical record requires updating with implant details. **Step 3.** Access the section for recording implant information within the patient's medical record. **Step 4.** Enter the details of the medical implant, including the batch number, serial number, and implant identifier (e.g., implant type or model). **Step 5.** Enter the associated procedure details, including the date and type of procedure performed, and any relevant notes about the implant. **Step 6.** Verify that the system saves and accurately documents all entered implant details in the patient's medical record. **Step 7.** Confirm that the system updates the discharge summary to include the recorded implant details, ensuring that the batch number, serial number, implant identifier, patient identifier, and procedure details are all included.	**1.** The system should correctly capture and display the entered details for the procedure and implant, including batch number and serial number. **2.** The saved details of the procedure and implants appear correctly in the patient's medical record. **3.** The discharge summary includes the recorded details of the medical implant and procedure.	Select Yes/No

MOM.4. The system manages and supports implementation of emergency medications protocols and maintains records.

MOM.4.a: The system maintains a record of emergency medications and supports regular updating of the list.

Test Case: Verify that the system can maintain records of emergency medications at different locations.

Pre-requisite for test	Test Validation
1. A healthcare staff member authorized to manage medication management system data should be logged into the system. **2.** The system should have a list of emergency medications and their storage locations.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the emergency medications management module. **Step 2.** Access the section for managing emergency medication records and verify that it allows for the documentation of medications at various locations (e.g., emergency room, ICU, general wards). **Step 3.** Enter the details of emergency medications (Dummy medication) available at a specific location, including medication name, dosage, quantity, and storage location, and save it in the system. **Step 4.** Verify that the system accurately saves and maintains the records of emergency medications for each location and that the information is accessible and up-to-date. **Step 5.** Retrieve emergency medication records from the system using the system search functionality. **Step 6.** Check that the system accurately saves and maintains the records of emergency medications for each location within the healthcare facility and that information is accessible for future reference.	**1.** The medication management system displays a comprehensive list of emergency medications stored at different locations within the facility, with accurate details for each medication. **2.** Healthcare staff can easily update or add new emergency medication records in the system, ensuring timely and accurate management of emergency medication inventory.	Select Yes/No

MOM.4. The system manages and supports implementation of emergency medications protocols and maintains records.

MOM.4.b: The system generates records of medication errors.

Test Case: Verify that the system generates records of medication errors.

Pre-requisite for test	Test Validation
1. The system has an active database or repository for storing medication error records. **2.** The system has predefined criteria for what constitutes a near miss, medication error, and adverse drug reaction. **3.** The system includes analysis tools for pharmacovigilance. **4.** Historical data on medication errors is available for analysis.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the medication error reporting module. **Step 2.** Simulate an event where a medication error occurs, such as incorrect dosage or wrong medication administration. **Step 3.** The system processes the input and detects a potential medication error based on predefined criteria. **Step 4.** Attempt to save or proceed with the input medication details. **Step 5.** The system generates an error alert indicating the nature of the medication error (e.g., "Dosage exceeds recommended limit" or "Medication does not match prescription"). **Step 6.** Acknowledge the error alert. **Step 7.** The system allows the user to acknowledge the alert and provides options to correct the error or proceed with logging the error. **Step 8.** Choose to log the medication error. **Step 9.** The system logs the medication error with detailed information, including the type of error, patient details, medication details, and the user who made the error. **Step 10.** Repeat steps 1-7 to simulate a near miss (e.g., an error detected and corrected before reaching the patient) and an adverse drug reaction (e.g., the patient experiences an unexpected side effect). **Step 11.** Navigate to the error and Adverse Drug Reactions (ADR) records section. **Step 12.** The error and ADR records section displays a list of logged medication errors, near misses, and adverse drug reactions. **Step 13.** Verify that the logged medication errors, near misses, and adverse drug reactions are present in the records. **Step 14.** The logged events appear in the list with all relevant details (e.g., timestamp, event type, patient information, and the user who logged the event). **Step 15.** Navigate to the pharmacovigilance section. **Step 16.** Perform a detailed analysis using the pharmacovigilance functionality (e.g., trend analysis, root cause analysis, statistical reports). **Step 17.** The system provides comprehensive analysis and generates detailed reports on medication errors, near misses, and adverse drug reactions.	**1.** All medication errors, near misses, and adverse drug reactions are accurately recorded in the system. **2.** The system provides a detailed analysis of pharmacovigilance .	Select Yes/No

MOM.4. The system manages and supports implementation of emergency medications protocols and maintains records.
MOM.4.c: The system has the capability to create an analytical dashboard for consolidating data on medication error.
Test Case: Verify that the system can create an analytics dashboard that consolidates medication error data and enables trend analysis over time to guide quality improvement efforts.

Pre-requisite for test	Test Validation
1. A healthcare staff member authorized to manage dashboard system data should be logged into the system. **2.** The system has an active database or repository for storing medication error records. **3.** Historical data on medication errors is available for analysis.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the dashboard creation module within the system. **Step 2.** Select the option to create a new analytical dashboard. **Step 3.** In the dashboard configuration screen, specify the type of data to be consolidated as medication errors. **Step 4.** Define the data sources for the medication error data (e.g., electronic health records, and incident reports). **Step 5.** Configure the data visualization elements (e.g., charts, graphs, tables) to represent different aspects of medication errors (e.g., type, frequency, time of occurrence, severity). **Step 6.** Set up filters to allow for customized views of the medication error data (e.g., by department, time period, medication type). **Step 7.** Save the dashboard configuration. **Step 8.** Verify that the dashboard is created successfully and displays accurate data on medication errors. **Step 9.** Check the functionality of the filters by applying different filter combinations and observing the changes in the data representation. **Step 10.** Check that the dashboard allows for exporting or sharing the consolidated data in various formats (e.g., PDF, Excel).	**1.** The system should allow the creation of an analytical dashboard that consolidates and accurately represents medication error data, with functioning filters and export options.	Select Yes/No

MOM.4. The system manages and supports implementation of emergency medications protocols and maintains records.		
MOM.4.d: The system supports implementation of emergency medication protocols for critical scenarios.		
Test Case: Verify that the medication management includes a provision for checklists, which helps in implementing medication protocol for emergency situations.		
Pre-requisite for test		**Test Validation**
1. A healthcare staff authorized to configure inventory data should be logged into the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the medication management module. **Step 2.** Access the section dedicated to checklist management or create a new checklist for medication management. **Step 3.** Check that the system provides options to create and customize checklists for various medication management tasks, such as inventory audits, medication administration, and stock replenishment. **Step 4.** Create a sample checklist that includes tasks for tracking medication inventory, verifying stock levels, checking expiration dates, and documenting medication administration. **Step 5.** Check that the system allows for the addition of specific items or criteria to the checklist, such as batch numbers, storage conditions, and patient identifiers. **Step 6.** Implement the checklist in a simulated inventory management scenario, ensuring that each task is completed and recorded accurately. **Step 7.** Confirm that the system generates alerts or notifications for incomplete or overdue checklist items as per the protocol. **Step 8.** Review the completed checklist to ensure that it accurately reflects the tasks performed, with all relevant details.	**1.** The medication management system includes functional checklists that facilitate inventory tracking and management tasks.	Select Yes/No

Chapter 4 - Digital Applications Controls (DAC)

DAC.1. The system provides secure and flexible access to users.

DAC.1.a: The system supports secure URL access.

Test Case: Verify that the system supports secure URL access for the user.

Pre-requisite for test	Test Validation
1. Authorized user with valid credentials for accessing patient data should be available. **2.** A secure URL to access the system is active.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1: Access the system using a web browser. **Step 2.** Enter the system's URL in the browser's address bar and press Enter. **Step 3.** Verify that the system redirects to a secure URL, starting with "https://". **Step 4.** Check that the browser displays a padlock icon in the address bar, indicating that the connection is secure. **Step 5.** Click on the padlock icon to view the security certificate details, and ensure that the certificate is valid and issued by a trusted Certificate Authority (CA). **Step 6.** Confirm that the certificate details, such as the domain name and expiry date, are accurate and up-to-date. **Step 7.** Test the system's response when accessing the URL using "http://" instead of "https://", and verify that the system automatically redirects to the secure "https://" version. **Step 8.** Verify that all internal links and resources within the system, such as images, scripts, and APIs, are loaded over secure "https://" connections. **Step 9.** Attempt to access the system using an authorized user's credentials from outside the healthcare organization's network with VPN/two-factor authentication. **Step 10.** Verify that the system prompts for OTP delivery to the registered mobile device. **Step 11.** Enter the correct OTP and verify that the system grants access, allowing the user to navigate the system as per their role's permissions.	**1.** The system allows access through URL to users with valid credentials. **2.** The system grants access to authorized users within the network. **3.** The system successfully prompts for OTP when accessing remotely with VPN/two-factor authentication. **4.** The system grants access upon correct OTP entry.	Select Yes/No

DAC.1. The system provides secure and flexible access to users.

DAC.1.b: The system supports the application usage on multiple devices.

Test Case: Verify that the system supports the application usage on multiple devices.

Pre-requisite for test	Test Validation
1. Authorized user with valid credentials for accessing patient data should be available. **2.** Multiple devices including smartphones, tablet computers, and laptops are available for testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Scenario 1: For laptop/desktop **Step 1.** Open preferred web browsers such as Chrome and Mozilla Firefox **Step 2.** Enter the URL or web address of the system into the browser's address bar. **Step 3.** Try to navigate to the system's login page. **Step 4.** Enter valid credentials to log in to the system. **Step 5.** Once logged in, check that the system interface loads correctly on the devices. **Step 6.** Check for any issues with screen layout, formatting, or functionality on both devices. **Step 7.** Test basic functions such as viewing patient records, entering data, and accessing menus or options. **Step 8.** Check the responsiveness of the system to user interactions and inputs on the devices. **Step 9.** Perform specific tasks within the system that are commonly used by users (e.g. scheduling appointments, and updating patient information). **Step 10.** Verify that users can complete these tasks. **Scenario 2: For Mobile/Tablet** **Step 1.** Open an application on a mobile phone or tablet. **Step 2.** Try to navigate to the system's login page. **Step 3.** Enter valid credentials to log in to the system. **Step 4.** Once logged in, check that the system interface loads correctly on the devices.	**1.** The system is accessible, and all features are displayed correctly on smartphones, tablet computers, and laptops. **2.** Specific tasks can be performed seamlessly on all devices. **3.** The system is responsive, and actions such as scrolling, tapping buttons, and entering data, work smoothly.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5. Check for any issues with screen layout, formatting, or functionality on both devices. **Step 6.** Test basic functions such as viewing patient records, entering data, and accessing menus or options. **Step 7.** Check the responsiveness of the system to user interactions and inputs on the devices. **Step 8.** Perform specific tasks within the system that are commonly used by users (e.g. scheduling appointments, and updating patient information). **Step 9.** Verify that users can complete these tasks.		

DAC.1. The system provides secure and flexible access to users.		
DAC.1.c: The system supports cross-browser compatibility where applicable.		
Test Case: Verify that the system supports cross-browser compatibility, ensuring consistent functionality and display across different web browsers.		
Pre-requisite for test		**Test Validation**
1. Working browsers like Chrome, Firefox, Safari, and Edge should be available on testing devices. **2.** Users with login credentials should be available.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Open the system on various web browsers commonly used by users, such as Google Chrome, Microsoft Edge, Safari, and Opera. **Step 2.** Check that the system display is consistent across different browsers, with no significant variations in layout, formatting, or visual elements. **Step 3.** Check that all user interface components, including buttons, menus, forms, and images, appear correctly and are aligned properly on each browser.	**1.** The system performs consistently across Chrome, Firefox, Safari, and Edge (as per the product specifications) **2.** All features and functionalities work correctly without errors or discrepancies.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 4. Perform basic functional tests on the system, such as logging in, navigating through different pages, submitting forms, and interacting with UI elements. **Step 5.** Check that all interactive features and functionalities work as expected on each browser without any errors or inconsistencies. **Step 6.** Check for any browser-specific issues, such as slow rendering or laggy behavior.		

DAC.1. The system provides secure and flexible access to users.		
DAC.1.d: The system offers multiple digital channels for the patient to engage with healthcare organizations and avail healthcare services.		
Test Case: Verify the functionality and effectiveness of the system's support through multiple service delivery channels.		
Pre-requisite for test		**Test Validation**
1. The user (dummy patient) should be logged into the system using valid credentials. **2.** Install the system's mobile app on a smartphone or tablet device.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Identify the different service delivery channels supported by the system, including Web, Email, Online messaging, Chatbot, SMS, Mobile/Tablets (Android, IOS), PHR app, and Kiosk. **Step 2:** Access the system through each identified service delivery channel. **Step 3:** Verify that the user interface is consistent and user-friendly across all service delivery channels, with appropriate layouts and designs. **Step 4:** Perform common user actions, such as scheduling appointments, making payments, or submitting requests, through each channel to ensure functionality is consistent.	**1.** Each service delivery channel is tested for functionality and accessibility, ensuring that users can interact with the system seamlessly across various platforms.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 5: Test the accuracy and completeness of data synchronization across channels by performing an action on one channel (e.g., scheduling an appointment) and verifying that it reflects correctly on other channels. **Step 6:** Check that the system maintains session integrity when switching between channels, ensuring that the user experience is seamless without requiring additional logins. **Step 7:** Test the system's responsiveness and performance across all channels, ensuring that operations like data retrieval, form submissions, and page loads are efficient. **Step 8:** Check the system's integration with external systems, such as payment gateways or third-party services, ensuring smooth operation across all channels. **Step 9:** Validate that any channel-specific features, such as mobile app notifications or kiosk-based QR code scanning, function as expected.	**2.** Users can receive notifications, access information, and perform necessary actions through their preferred service delivery channels without encountering any issues.	

DAC.1. The system provides secure and flexible access to users.

DAC.1.e: The system supports single sign-on.

Test Case: Verify that the system supports single sign-on (SSO) functionality, allowing users to access multiple applications or systems with a single set of login credentials.

Pre-requisite for test	Test Validation
1. User accounts are created and linked to the SSO system and valid credentials to login should be available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1: Log in to the system using valid SSO credentials. **Step 2.** Check and confirm that the user is able to access the system successfully.	**1.** Users should be able to log in to the system using SSO seamlessly.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 3. Try to access another integrated application or system without re-entering login credentials. **Step 4.** Confirm that the user remains authenticated and gains access to the additional application seamlessly, indicating persistent SSO session management. **Step 5:** Test the ability to log out from one application and ensure that the session is terminated across all SSO-connected applications.	**2.** Once authenticated, users should have access to multiple integrated applications/systems without needing to re-authenticate.	

DAC.1. The system provides secure and flexible access to users.		
DAC.1.f: The system supports a mobile application for medical professionals that is compatible with the prevalent mobile operating systems.		
Test Case: Verify that the mobile application of the system is compatible with prevalent mobile operating systems.		
Pre-requisite for test		**Test Validation**
1. The mobile application should be installed on a device running Android and/or iOS. **2.** User should be logged into the system using valid credentials.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Open the mobile application on devices compatible with prevalent operating systems such as Android or iOS. **Step 2.** Check that the application's interface and features are displayed correctly on both iOS and Android devices. **Step 3.** Check the basic functionalities such as navigation, input fields, buttons, and menus to ensure they work as expected on each operating system. **Step 4.** Verify that these features work seamlessly on devices running each supported operating system. **Step 5.** Try to perform common tasks, such as logging in, accessing features, and navigating through the app, and verify that it works properly.	**1.** The dedicated mobile application launches successfully on devices compatible with prevalent operating systems. **2.** Basic functionalities within the mobile application are tested and performed as expected.	Select Yes/No

DAC.2. The system has robust access and data security controls.		
DAC.2.a: The system is able to encrypt all the healthcare data at rest and that in transmission.		
Test Case: Verify that the system utilizes strong encryption methods to protect sensitive data.		
Pre-requisite for test		**Test Validation**
		External Certification +Self Attestation
Steps to produce	**Expected Outcome**	**Note/Deviation**
The EMR/HIS system needs to submit a security white paper explaining the security protocol used to protect the data and it may include below point. **a. Encryption Methods:** The types of encryption (e.g., AES-256, RSA) used to secure data both during storage (data-at-rest) and transmission. **b. Compliance:** Details of the encryption and security practices meet industry standards or regulations (e.g., GDPR, HIPAA, ISO 27001). **c. Secure Communication:** Details about the use of encryption protocols like TLS/SSL for secure communication between systems. **d. Risk Mitigation:** Steps taken to mitigate risks, such as breaches or data leaks, related to encryption failures.	Submission of white paper and confirmation of WASA certification.	Select Yes/No

DAC.2. The system has robust access and data security controls.
DAC.2.b: The system provides role-based access to patient data in line with the role assigned to the healthcare staff.
Test Case: Verify that the system has the capability to classify patient clinical data accurately.

Pre-requisite for test	Test Validation
1. User roles and permissions are defined according to the roles and responsibilities within the healthcare organization. **2.** Different users with their login credentials representing different roles should be available at the time of testing. **3.** Create a dummy patient clinical data which includes medical notes, diagnoses, lab results, and other relevant information, and save it into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Log in to the system using credentials for a healthcare provider role such as Doctor, Nurse, or Administrator staff. **Step 2.** Try to access patient medical records and treatment plans. **Step 3.** Try to perform user role-specific actions for e.g. As a doctor try updating the treatment plan or adding new medical notes. **Step 4.** Attempt to perform actions not permitted for their role (e.g., doctor trying to update billing information). **Step 5.** Confirm that these actions are blocked, screens are not visible for actions outside of the access. An appropriate "Access Denied" message should be displayed wherever necessary. **Step 6.** Log in as a billing department employee. **Step 7.** Verify that the patient data cannot be accessed through the login of the billing department's employee.	**1.** The system should enforce role-based access control, allowing users to access only the data necessary for their role. **2.** Unauthorized users should be denied access to patient data.	Select Yes/No

DAC.2. The system has robust access and data security controls.
DAC.2.c: The system configures rules to capture and retain audit logs.
Test Case: Verify that the system has the capability to configure rules for collecting and retaining audit logs.

Pre-requisite for test	Test Validation
1. Healthcare staff/Administrator authorized to access and configure audit logs should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the audit log management or configuration section within the system. **Step 2.** Attempt to configure a new rule for collecting audit logs related to user login attempts. **Step 3.** Save the configured rule and verify that it appears in the list of active audit log collection rules. **Step 4.** Perform a series of user login attempts and other system actions to generate audit log entries. **Step 5.** Verify that the audit logs are being collected according to the configured rule, reflecting the appropriate user actions. **Step 6.** Attempt to modify an existing audit log collection rule (e.g., changing the type of actions logged). **Step 7.** Save the modification and verify that the updated rule is correctly applied. **Step 8.** Attempt to delete an existing audit log collection rule and verify that the system prompts for confirmation. **Step 9.** Confirm the deletion and verify that the rule is removed from the list of active audit log collection rules. **Step 10.** Review the stored audit logs to ensure they are retained according to the specified retention rule. **Step 11.** Attempt to access audit logs that have exceeded the retention period and verify that they are no longer available or have been archived according to the policy. **Step 12.** Check that the system is integrated or configured with automated tools for continuous monitoring and analysis of audit logs to detect and respond to security incidents promptly. **(Optional)**	**1.** The system allows to configure detailed audit log rules specifying the collection of user information, action types, actions performed, timestamps, status, and IP addresses. **2.** The system captures and retains audit logs according to the configured rules.	Select Yes/No

Chapter 5 - Digital Operations Management (DOM)

DOM.1. Standardized methodology is used to design and implement the system across the healthcare organization.

DOM.1.a: The system configures access rights based on the technical roles.

Test Case: Verify that the system supports access rights based on technical roles, ensuring that users are granted appropriate permissions according to their roles within the organization.

Pre-requisite for test	Test Validation
1. A healthcare staff/administrator with authorization to access and configure access rights based on hierarchy (RBAC model) should be logged into the system. **2.** Create dummy user accounts for each technical role and assign the corresponding role-based access rights within the system and login credentials should be available at the time of testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to managing user access. **Step 2.** Define different user roles corresponding to hierarchical levels within the organization. (For e.g. Create a new role "Manager" with permissions: Read, Update; another role "Staff" with permissions: Read) **Step 3.** Set access permissions for each user role, specifying their level of access to actions, features, and data. **Step 4.** Log in to the system using a dummy user account. **Step 5.** Check that users can only access functionalities and data appropriate to their role as defined. **Step 6.** Test access to sensitive or restricted areas of the system to ensure that users without appropriate permissions are denied access. **Step 7.** Make changes to user roles, hierarchy, or access permissions within the system. **Step 8.** Check that access rights are updated accordingly, and that users experience the expected changes in their access levels.	**1.** The system allows technical staff with proper authorization to perform role-based action. **2.** The system must deny any attempt by an unauthorized staff to carry out an activity that is outside the scope of their responsibility.	Select Yes/No

DOM.1. Standardized methodology is used to design and implement the system across the healthcare organization.
DOM.1.b: The system provides a help section in the system to guide the users.
Test Case: Verify that the system provides a help section for comprehensive guidance and support to users, including documentation, FAQs, and tutorials, to enhance their understanding of system functionalities and troubleshoot common issues.

Pre-requisite for test	**Test Validation**
1. User should be logged into the system.	Manual

Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Access the system's user interface and navigate to the help section. **Step 2.** Review the contents of the help section to ensure it includes comprehensive documentation, covering all system functionalities, features, and processes. **Step 3.** Check that the help section contains a well-organized FAQ (Frequently Asked Questions) section, addressing common user queries and issues. **Step 4.** Verify the presence of tutorials or guides, either in text or video format, that provide step-by-step instructions for using key features of the system. **Step 5.** Test the search functionality within the help section to ensure users can easily find relevant information by entering keywords or phrases. **Step 6.** Confirm that the help section includes a troubleshooting guide, offering solutions to common technical problems or errors users may encounter.	**1.** The system allows users to access the help section from the main interface and view documentation/blogs, FAQs, and tutorial sections.	Select Yes/No

DOM.1. Standardized methodology is used to design and implement the system across the healthcare organization.		
DOM.1.c: The system has a robust security mechanism to protect data against external vulnerabilities.		
Test Case: Verified by external certification.		
Pre-requisite for test		**Test Validation**
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External Certification	Confirmation of a valid WASA certification within the last two years or after the most recent major system upgrade.	Select Yes/No

DOM.1. Standardized methodology is used to design and implement the system across the healthcare organization.	
DOM.1.d: The system is capable of sharing the master data across all the modules of the system.	
Test Case: Verify that the system has the capability to store and seamlessly share master files and data across all modules.	
Pre-requisite for test	**Test Validation**
1. A healthcare staff with authorization to create and manage a master file should be logged into the system. **2.** All the information required to create a master file for the patient should be available for testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to the management of master files. **Step 2.** Create a master file (For example master file for patient) with relevant information and save it in the system database. **Step 3.** Provide access to the master file and data to a few modules (e.g., billing, scheduling) of the system. **Step 4.** Log in as healthcare staff and check and confirm that the hospital staff with proper authorization can access that file from the system database. **Step 5.** Go to different modules (e.g., billing, scheduling) and check if the master file data is accessible and consistent. **Step 6.** As an administrator, modify a record in the master file in one module. **Step 7.** Go to different modules again to ensure the updated master file data is consistent across all modules and confirm that the changes are reflected consistently across all other modules where the data is utilized. **Step 8.** Attempt to create duplicate master file records within the system. **Step 9.** Check that the system detects duplicity and prevents the creation of duplicate records to maintain data integrity. **Step 10.** Check that the system displays some notification or error message for potential duplication of records.	**1.** The system stores and shares master files and data across all modules. **2.** Data consistency is maintained, and data duplication is prevented.	Select Yes/No

DOM.1. Standardized methodology is used to design and implement the system across the healthcare organization.
DOM.1.e: The system is capable of taking a backup/ archiving old data.
Test Case: Verify that the system incorporates a data backup/archive capability that allows administrators to retain data for a specified retention period, adhering to data compliance requirements and industry best practices.

Pre-requisite for test	Test Validation
1. A healthcare staff/administrator with authorization to access the backup setting should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to data management and backups. **Step 2.** Set the data retention period to 5 years (or as dictated by the applicable state law). **Step 3.** Confirm that the system allows administrators to configure and manage retention policies for data backups and archives, specifying the duration for which data should be retained. **Step 4.** Trigger a manual backup of the current data. **Step 5.** Check the backup logs and storage location to confirm that the backup has been created. **Step 6.** Check if the data from 5 years ago is still available in the system. **Step 7.** Confirm that any data older than the retention period (e.g., more than 5 years old) is automatically deleted or archived according to the configured settings. **Step 8.** Stimulate a scenario where the system is restoring backup in the system. **Step 9.** Check that the backup is properly restored in the system and all the data in the backup is accessible to the healthcare staff.	**1.** The system allows the healthcare staff to perform data backup according to the defined retention policy. **2.** The system should automatically delete the backup after the retention period is over. **3.** The system can restore backups, and all data in the backup is accessible to healthcare staff.	Select Yes/No

DOM.1. Standardized methodology is used to design and implement the system across the healthcare organization.

DOM.1.f: The source code management processes are defined and practiced by the HIS/EMR vendor.

Test Case: Verify that the system implements well-defined source code management processes, including version control, documentation, and tracking of the system's source code.

Pre-requisite for test	Test Validation
1. Access to the vendor's source code management (SCM) system (e.g., Git, SVN). **2.** Defined processes and policies for versioning and documentation.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Review the vendor's version control system (e.g., Git, SVN) to ensure that the source code is organized into versioned repositories. **Step 2.** Check that each version is tagged or labeled appropriately to indicate its release or development stage (e.g., alpha, beta, production). **Step 3.** Examine the documentation associated with the source code, including README files, developer guides, and API documentation. **Step 4.** Check that the documentation provides clear instructions for setting up the development environment, building the system, and deploying it in production. **Step 5.** Check the tracking mechanisms used by the vendor to monitor changes to the source code. **Step 6.** Check that issues, bugs, and feature requests are logged and tracked in a centralized system. **Step 7.** Review the vendor's code review processes to ensure that all changes to the source code undergo thorough review by other developers. **Step 8.** Verify that code reviews are conducted using established guidelines and that feedback is provided constructively.	**1.** The system follows well-defined source code management processes, including organized versioning and thorough documentation.	Select Yes/No

DOM.2. The system provides software support and guidance to the users.
DOM.2.a: The HIS/ EMR vendor disseminates timely patches or updates to address key functionality bugs or identified security issues.
Test Case: Verify that the system delivers timely patches and updates to address security vulnerabilities and other issues.

Pre-requisite for test	Test Validation
1. Healthcare staff should be logged into the system. **2.** A communication channel with the vendor is established for receiving updates. **3.** The system has a maintenance window scheduled for applying patches and updates.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to system updates and patches. **Step 2.** Check the section for new patches and updates. **Step 3.** Open and review the details of the recent patch/update to understand the issues addressed, including security vulnerabilities and other critical fixes. **Step 4.** The vendor may demonstrate or show screenshots of notifications/emails/messages released for users at the time of patch release.	**1.** The system can maintain the patch/update log properly with the issue addressed.	Select Yes/No

DOM.2. The system provides software support and guidance to the users.

DOM.2.b: The HIS/EMR vendor provides maintenance and user support in a timely manner with clearly defined service level agreements (SLAs).

Test Case: Verify that the system is accompanied by robust maintenance support, ensuring continuous functionality, prompt issue resolution, regular updates, patches, and responsive customer support.

Pre-requisite for test	Test Validation
	Self-Attestation

Steps to produce	Expected Outcome	Note/Deviation
Self-Attest (Documentation of maintenance contract including SLAs)		Select Yes/No

DOM.3. The system captures and manages critical incidents.		
DOM.3.a: The system has the capability to log critical security incidents and events information.		
Test Case: Verify that the system possesses the capability to log critical security incidents and event information effectively.		
Pre-requisite for test		**Test Validation**
1. Healthcare staff login credentials with authorization to check the security log should be available at the time of testing. **2.** The system is configured to log all critical security incidents and events, including unauthorized access attempts, failed login attempts, data breaches, and other security-related activities.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Simulate a security incident, such as a login attempt with incorrect credentials or an unauthorized access attempt. **Step 2.** Log in to the system as a healthcare provider with authorization to access the security log or audit trails. **Step 3.** Check that the system can log critical security incidents and event information for each logged security incident or event, such as timestamp, user identity, source IP address, and the nature of the incident.	**1.** The system accurately logs critical security incidents and events. **2.** Logs contain detailed information suitable for post-incident analysis.	Select Yes/No

DOM.3. The system captures and manages critical incidents.
DOM.3.b: The system has capability to roll-back changes by a designated IT officer, whenever needed.
Test Case: Verify that the system has an automatic or manual transaction rollback capability to return to its previous state in case of transaction errors or failures.

Pre-requisite for test	Test Validation
1. Administrator or designated IT officer credentials are available. **2.** Roll-back functionality is enabled and properly configured. **3.** A backup of the system and data exists before performing patches or upgrades.	Manual + Self-attestation

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Verify that the system is configured to detect transaction errors or failures during processing. **Step 2.** Execute a transaction and simulate a transaction error or failure scenario, such as database connection issues or validation errors. **Step 3.** Check the system's response to the simulated error condition. **Step 4.** Check that the system automatically rolls back the incomplete or erroneous transaction to its previous state. **Step 5.** Confirm that the executed transaction is not saved in the system database **Step 6.** Confirm that the system initiates an automatic rollback of the transaction to its previous state when an error or failure occurs, without requiring manual intervention. **Step 7.** Validate that the system provides a manual rollback option for authorized users, allowing them to revert a transaction to its previous state in case of errors or failures that are not automatically handled.	**1.** The system successfully handles roll-back operations for patches, upgrades, and transactions.	Select Yes/No

DOM.4. The system manages access controls to provide secure access to the users.
DOM.4.a: The system follows a defined password policy for user authentication.
Test Case: Verify the effectiveness and compliance of the password policy module within the system.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization access to configure password settings should be logged into the system. **2.** All the information to create a new user should be available at the of testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section related to the password management functionality. **Step 2.** Check system configuration for password policy such as minimum length, complexity, expiration intervals, password renewal timeframe such as 90 days, etc. **Step 3.** Create a new user account and attempt to set a password that does not meet the configured policies (e.g., less than required characters, lacks complexity). **Step 4.** Check that the system rejects passwords that do not meet the defined criteria and provides appropriate error messages or notifications to users. **Step 5.** Try to set a password that satisfies all the mandatory requirements and save it. **Step 6.** Check that the system allows the user to log in to the system with the new password. **Step 7.** Simulate the passage of the number of days set for password renewal and check that the system notifies the user to change their password. **Step 8.** Try to log into the system with the old password and check that the system denies logging in and displays the proper error message /notification.	**1.** The system successfully enforces the defined password policies, ensuring compliance with security standards. **2.** The user is not able to create a password that does not follow predefined rules. **3.** The user is not able to log in to the system with a password that exceeds the password renewal timeframe.	Select Yes/No

DOM.4. The system manages access controls to provide secure access to the users.
DOM.4.b: The system has the capability to configure an auto screen lock feature.
Test Case: Verify the effectiveness of the auto screen lock feature in enhancing security by automatically locking user screens after a defined period of inactivity.

Pre-requisite for test		Test Validation
1. Healthcare staff with authorization to access user management should be logged into the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the system settings or security configuration section. **Step 2.** Locate the option to configure the auto screen lock feature. **Step 3.** Check that administrators can define the period of inactivity after which screens should be automatically locked. **Step 4.** Confirm that there are options to customize the auto screen lock duration, such as specifying the time interval in minutes or hours. **Step 5.** Check that administrators can enable or disable the auto screen lock feature as needed. **Step 6.** Wait for the configured period of inactivity to elapse without any user interaction. **Step 7.** Check that the screen is automatically locked after the specified duration of inactivity. **Step 8.** Attempt to unlock the screen by moving the mouse or pressing keys on the keyboard. **Step 9.** Confirm that the screen remains locked and prompts the user to enter their credentials to regain access.	**1.** The system successfully allows administrators to configure and enable the automatic screen lock feature. **2.** User screens lock automatically after the specified period of inactivity, enhancing security. **3.** Screens remain locked until authenticated users unlock them.	Select Yes/No

DOM.4. The system manages access controls to provide secure access to the users.
DOM.4.c: The system has the capability to block user-based security provisions.
Test Case: Verify the effectiveness of the user lockout capability in enhancing security measures within the system.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to access user management should be logged into the system. 2. A user with valid credentials should be available for the testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the user management or security settings section. **Step 2.** Check that there are configurable settings for user lockout, including thresholds for the number of failed logins attempts and duration of lockout. **Step 3.** Configure threshold value for the number of failed logins attempts and duration of lockout and save it into the system. **Step 4.** Log out of the system. **Step 5.** Attempt to log in with an invalid password multiple times, exceeding the configured threshold for failed login attempts. **Step 6.** Check that after reaching the threshold, the user account is automatically locked out, preventing further login attempts. **Step 7.** Attempt to log in with the locked-out user account to confirm that the access is denied. **Step 8.** Check and confirm that the system generates notifications or alerts when a user account is locked out due to failed login attempts. **Step 9.** Adjust the system date/time settings to simulate the passage of time (Lockout time). **Step 10.** Attempt to log in again with the previously locked-out user account to verify that access is restored after the lockout period.	**1.** The system locks user accounts after the configured number of unsuccessful login attempts. **2.** The system successfully enforces the user lockout policy. **3.** Users are notified about account lockouts and the duration.	Select Yes/No

DOM.4. The system manages access controls to provide secure access to the users.
DOM.4.d: The system has effective centralized user management.
Test Case: Verify the effectiveness and compliance of the centralized user management capability within the system.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization access to configure password settings should be logged into the system. 2. All the information to create a new user should be available at the of testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section with the functionalities related to centralized user management. **Step 2.** Create a new user account/role with specific sets of permissions. **Step 3.** Attempt to log in with the user account details and confirm that the user is able to log in. **Step 4.** Check access rights to test role-based access control by carrying out actions that are role-specific for the user and see if there are any issues. **Step 5.** Confirm that the user performs role-specific operations as defined. **Step 6.** Try performing actions that are not role-specific to the user. **Step 7.** Confirm that the system displays some kind of notification or alert to the user regarding access rights, specifying that the user does not have access to perform that action. **Step 8.** Make some changes to the user account/role and permissions and save it. **Step 9.** Check and confirm that changes to permissions and roles are applied. **Step 10.** Check that the user account can be deactivated or deleted as needed by either deleting or deactivating the user account. **Step 11.** Check that user account actions are logged for audit purposes.	1. The system allows centralized user management, allowing efficient administration of user accounts, permissions, and roles.	Select Yes/No

DOM.4. The system manages access controls to provide secure access to the users.		
DOM.4.e: The system has the capability to configure multi-factor authentication (MFA).		
Test Case: Verify the flexibility and effectiveness of the Multi-Factor Authentication (MFA) configuration within the system.		
Pre-requisite for test		**Test Validation**
1. A user with valid credentials and an enabled MFA account should be present during testing. **2.** MFA methods (e.g., SMS, email, authenticator app) are supported and properly configured.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Attempt to log in with a user account that is MFA enabled. **Step 2.** Verify that the user is asked for a two-step authentication process as per the defined MFA policy in healthcare organizations. **Step 3.** Check that the user is able to authenticate through available and configured mechanisms such as OTP, fingerprint reader, facial recognition software, etc. **Step 4.** After the user is authenticated, they can log into the system.	**1.** The system successfully enforces MFA for user accounts based on the configured settings.	Select Yes/No

DOM.5. The system supports the migration to new system whenever needed by healthcare organization.
DOM.5.a: The system supports the migration to a new system whenever needed by the healthcare organization.
Test Case: Verify the system's support for migration to a new system by healthcare organization.

Pre-requisite for test	Test Validation
1. A migration plan with all required configurations, data, and system components is prepared. **2.** Backup of the existing system is taken. **3.** The new system environment is ready to receive the migrated data and configurations.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the system migration module. **Step 2.** Initiate the migration setup process and select the components to be migrated (e.g., patient records, billing data, configurations, etc.). **Step 3.** Confirm the validation of data consistency and integrity checks before migration. **Step 4.** Execute the migration process and check progress logs for any errors or warnings. **Step 5.** Upon migration completion, verify that the system provides a detailed summary of migrated components, including any discrepancies. **Step 6.** Navigate to the new system and verify that all critical data (e.g., patient records, and billing data) has been successfully migrated. **Step 7.** Validate the configurations, ensuring that all previous settings have been replicated accurately in the new system. **Step 8.** Test the core functionalities (e.g., patient registration, appointment scheduling, billing, etc.) to confirm they are operational in the new system environment. **Step 9.** Confirm the system maintains audit logs for migration events, highlighting any issues or areas needing attention. **Step 10.** Verify that user roles and access permissions remain intact post-migration, with no unauthorized access to sensitive data. **Step 11.** Record feedback from healthcare professionals on system usability post-migration to ensure smooth continuity of operations.	**1.** The migration process completes without errors. **2.** All data and configurations are accurately transferred to the new system. **3.** The new system operates smoothly, supporting healthcare activities without operational disruptions.	Select Yes/No

Chapter 6 - Finance and Procurement Management (FPM)

FPM.1. The system provides ability to manage the supply chain processes.

FPM.1.a: The system configures masters, workflows, and rules for procurement management.

Test Case: Verify the system's capability to configure workflows for procurement and inventory management.

Pre-requisite for test	Test Validation
1. Healthcare staff authorized to manage procurement and inventory workflow should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the procurement & Inventory configuration section in the system. **Step 2.** Select the master's tab and create the material master, supplier master, and other necessary data (e.g., item categories, unit of measure, pricing details). **Step 3.** Navigate to the workflow configuration tab and configure workflows for supplier onboarding, procurement, quality control, and stock management. **Step 4.** For supplier onboarding, set up approval processes, documentation requirements, and compliance checks. **Step 5.** Define workflows for procurement, including purchase order creation, approval hierarchies, and supplier selection criteria. **Step 6.** Configure workflows for quality control to track the receipt and inspection of materials, including critical checks for medical devices and general supplies. **Step 7.** Set up stock management workflows, including reorder levels, stock audits, and replenishment based on consumption trends. **Step 8.** Customize procurement and inventory rules for handling specific product categories, such as medical devices vs general supplies, including budget checks, supplier certifications, and regulatory compliance.	**1.** The system should allow administrators to define and customize procurement workflows according to hospital-specific needs. **2.** Workflow configuration options should cover all essential aspects of the procurement process, including approval rules, notifications, and integration capabilities. **3.** The system should execute distinct workflows based on the specific product category during procurement processes	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 9. Save the configurations and apply system-wide. **Step 10.** Initiate a procurement request for medical devices and verify if the workflows and rules specific to medical devices are correctly applied. **Step 11.** Initiate a procurement request for general supplies and confirm if the respective workflows are followed. **Step 12.** Validate that quality control and stock management workflows are triggered based on the configured rules for both medical devices and general supplies. **Step 13.** Verify the system's flexibility by modifying an existing workflow (e.g., changing the approval hierarchy for procurement of medical devices) and ensuring the changes are applied immediately without system issues.		

FPM.1. The system provides ability to manage the supply chain processes.		
FPM.1.b: The system tracks the movement of stocks within the healthcare organization.		
Test Case: Verify the system's capability to track the movement of stock in a hospital, including stock procurement, setting minimum threshold levels, and generating alerts for low stock.		
Pre-requisite for test		**Test Validation**
1. Healthcare staff with the authorization to manage stock should be logged into the system. **2.** Dummy items (Medicine or equipment) should be present in the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the inventory management module within the system. **Step 2.** Select an existing stock item and check the current stock level.	**1.** The system accurately captures stock movements across hospital units/departments.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 3. Set a minimum threshold level for the selected dummy stock item (e.g., a specific quantity that should trigger a reorder). **Step 4.** Save the configured threshold level and ensure it is correctly reflected for the selected stock item. **Step 5.** Initiate a stock movement by simulating the consumption or transfer of the dummy stock item within the hospital (e.g., issuing items to different departments or wards). **Step 6.** Verify that the system updates the stock levels in real time after the movement is recorded. **Step 7.** Reduce the stock level below the set minimum threshold by simulating additional consumption or transfer of the stock item. **Step 8.** Check if the system generates an alert or notification for low stock when the threshold is reached. **Step 9.** Navigate to the procurement module and initiate a stock procurement request for the low-stock item. **Step 10.** Verify that the system logs the procurement request and updates the stock levels once the new stock is received and processed.	**2.** Stock management feature provides a comprehensive overview of stock. **3.** The system is able to send an alert to all the relevant authorities when the stock level falls below the threshold level.	

FPM.1. The system provides ability to manage the supply chain processes.
FPM.1.c: The system generates and manages indents.
Test Case: Verify the system's capability to create and manage indents for ordering medical supplies or equipment, and track the status of orders through the procurement process.

Pre-requisite for test	Test Validation
1. Healthcare staff with the authorization to create and manage indents should be logged into the system. **2.** All the information to fill the procurement request should be available. **3.** Login credentials of procurement staff should be available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the procurement and inventory management module. **Step 2.** Select the option to create a new indent for ordering medical supplies or equipment. **Step 3.** Enter required details such as product name, product category (e.g., medical devices, general supplies), quantity, description, and urgency of the request. **Step 4.** Check the system for available stock of the requested items. **Step 5.** If stock is available, proceed with a stock issuance request. **Step 6.** If stock is insufficient, select the option to place an order for the required items. **Step 7.** Review and confirm the indent details for both stock issuance and order placement. **Step 8.** Submit the indent and note the indent reference number. **Step 9.** Navigate to the indent management section to view the submitted indent. **Step 10.** Track the status of the indent (e.g., approved, pending, stock issued, order placed). **Step 11.** Make modifications to the indent if required (e.g., changing quantities or adding items). **Step 12.** Approve the indent and verify that the system updates the stock levels accordingly if stock is issued or an order is placed. **Step 13.** Check and confirm that the indent status is updated to "Completed" or "Delivered" upon successful receipt of the ordered item.	**1.** The system should allow seamless creation and management of indents for ordering medical supplies or equipment. **2.** Indent status should be clearly displayed and updated based on the progress of the procurement process. **3.** Authorized users should have the ability to track, manage, and monitor indent-related activities efficiently within the hospital system.	Select Yes/No

FPM.1. The system provides ability to manage the supply chain processes.
FPM.1.d: The system creates and tracks the purchase order.
Test Case: Verify the functionality of the digital purchase order system in creating, managing, and tracking purchase orders electronically in a hospital setting.

Pre-requisite for test	Test Validation
1. The system should be logged in by the healthcare staff with authorization to manage purchase orders. **2.** Availability of test data representing items or supplies to be included in purchase orders.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the procurement management module. **Step 2.** Select the option to create a new purchase order. **Step 3.** Enter purchase order details, including vendor information, item details, quantities prices, delivery date, and location. **Step 4.** Review and confirm the purchase order details. **Step 5.** Submit the purchase order for approval. **Step 6.** Navigate to the purchase order tracking section. **Step 7.** Verify that the submitted purchase order appears in the tracking list with status (e.g., pending approval, approved, dispatched). **Step 8.** Approve the purchase order if required, based on the user role. **Step 9.** After approval, confirm the purchase order status is updated to 'Approved' and sent to the vendor. **Step 10.** Track the purchase order throughout its lifecycle (e.g., from dispatched to delivered). **Step 11.** Once delivered, check the purchase order status is marked as 'Completed' and verify that the system updates the inventory accordingly.	**1.** The purchase order is created, tracked, and completed in the system. **2.** Inventory is updated after the purchase order is marked as delivered.	Select Yes/No

FPM.1. The system provides ability to manage the supply chain processes.
FPM.1.e: The system captures the receipt of items as per the purchase order and generates receipt notes and flags discrepancies.
Test Case: Verify the effectiveness and accuracy of the material receipt note feature in the hospital system for tracking received goods or materials, including quantity and quality.

Pre-requisite for test	Test Validation
1. The healthcare staff with authorization to create material receipt notes should be logged into the system. 2. All the information to create material receipts should be available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the inventory or procurement module. **Step 2.** Select the option to record the receipt of items against a purchase order. **Step 3.** Enter the purchase order number (e.g. PO123456) or select the purchase order from the list. **Step 4.** Verify that the system displays the ordered items, quantities, and expected delivery details from the purchase order. **Step 5.** Enter the actual quantity and condition of items received. **Step 6.** If all items match the purchase order, confirm the receipt and generate a material receipt note. **Step 7.** If discrepancies are found (e.g., incorrect quantities or damaged items), enter the discrepancy details (e.g., short delivery, damaged goods). **Step 8.** Verify that the system: flags discrepancies such as mismatched quantities or damaged goods, and provides options for partial receipt or rejecting items. **Step 9.** Confirm that the material receipt note includes: accurate details of the goods and services received, quantity, quality, price, and life span/expiry information, any discrepancies, and actions taken. **Step 10**. Save the receipt note, ensuring it reflects the actual items received and any discrepancies. **Step 11**. Verify that the receipt note is generated, stored, and includes all relevant details for tracking. **Step 12**. Check that inventory is updated based on the receipt note and that discrepancies are flagged for resolution.	**1.** The system creates the material receipt notes (MRN) successfully with accurate details and lists them in the MRN. **2.** Users can edit, update, and verify MRNs as needed, and changes are reflected correctly.	Select Yes/No

FPM.1. The system provides ability to manage the supply chain processes.
FPM.1.f: The system records feedback about the quality of purchased goods.
Test Case: Verify the capability of the system to record quality concerns and feedback related to ordered items in a hospital and track any issues related to the quality of supplies, equipment, or pharmaceutical products.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to access the inventory management system should be logged in.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the feedback or quality management module in the system. **Step 2.** Select the option to provide feedback on received goods. **Step 3.** Enter the purchase order number or select the relevant PO from the list. **Step 4.** Verify that the system displays the details of the received goods associated with the selected purchase order. **Step 5.** Record feedback on the quality of the received goods, including overall quality rating (e.g., excellent, good, fair, poor), any specific concerns, quantity, any issues or defects encountered, etc. **Step 6.** Attach any relevant documents or images supporting the feedback, (if applicable). **Step 7.** Use the system's scoring mechanism to rate the quality of the supplier based on the received goods. **Step 8.** Submit the feedback for review. **Step 9.** Verify that the feedback, including quality concerns and supplier ratings, is recorded and stored in the system. **Step 10.** Check that the feedback is linked to the corresponding purchase order and visible in feedback or quality management reports. **Step 11.** Confirm that the system provides options for follow-up actions, such as notifying relevant departments or initiating corrective actions if necessary.	**1.** Users should be able to easily submit and track quality issues with detailed information. **2.** Quality concerns and feedback can be tracked, managed, and updated with relevant statuses and actions. **3.** Users can provide detailed feedback and suggestions for corrective actions after receiving the notification/ alert.	Select Yes/No

FPM.2. The system manages vendor payments.		
FPM.2.a: The system configures rules and workflows to manage vendor invoices.		
Test Case: Verify the system's capability to capture, validate, and process vendor invoices and configure associated rules.		
Pre-requisite for test		**Test Validation**
1. Healthcare staff with authorization to access vendor management systems should be logged into the system. **2.** Sample invoices in paper/pdf format should be available.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the Vendor Invoice Management section. **Step 2.** Select the option to configure rules for vendor invoice processing. **Step 3.** Define validation rules (e.g., mandatory fields, date formats, vendor verification, PO matching) and save the configured rules. **Step 4.** Initiate the process to capture vendor invoices. **Step 5.** Upload a sample invoice in PDF format or use a scanner to capture a paper invoice. **Step 6.** Check that the system extracts data from the uploaded/scanned invoice and populates the relevant fields in the system. **Step 7.** Validate the captured invoice data against the predefined rules. **Step 8.** Check for any validation errors and correct them if necessary. **Step 9.** Process the validated invoice, linking it to the corresponding purchase order and updating the accounts payable. **Step 10.** Generate a report summarizing the captured, validated, and processed invoices, including any errors encountered and resolved.	**1.** Healthcare staff should be able to access the vendor invoice management section and configure rules without any issues. **2.** Validation rules should be saved and applied correctly. **3.** The system should validate the captured data against the configured rules, flagging any discrepancies or errors.	Select Yes/No

FPM.2. The system manages vendor payments.

FPM.2.b: The system supports payments through multiple online/digital channels.

Test Case: Verify the system's capability to facilitate vendor payments through various digital payment channels, including electronic funds transfer (EFT), wire transfer, online bill payment through a bank's website, mobile payment applications, UPI, and credit/debit card payments.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to access the payment module should be logged in to the system. **2.** Valid vendor details and payment authorization should be available. **3.** Access to different digital payment methods for testing purposes (e.g., online banking, mobile payment apps).	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the vendor payment section. **Step 2.** Select the supplier from the approved supplier list. **Step 3.** Choose the desired digital payment channel from the available options. **Step 4.** Enter the necessary payment details, including vendor details (name, account number, contact information), payment amount, invoice or reference number, and payment date. **Step 5.** Check that the system prompts for required information based on the selected payment method. **Step 6.** Initiate the payment transaction through the selected digital payment channel. **Step 7.** Confirm that the payment request has been successfully processed and that a transaction reference or confirmation has been generated. **Step 8.** Check for a payment confirmation message or notification within the system. **Step 9.** Confirm with the vendor or recipient that the payment has been received and processed successfully. **Step 10.** Check and confirm that the system updates payment status to reflect the successful completion of the transaction.	**1.** The system should seamlessly facilitate vendor payments through each selected digital payment method. **2.** Each payment method should be integrated effectively within the inventory management system. **3.** Users should be able to initiate payments securely and receive real-time updates on payment status. **4.** Payments made through electronic funds transfer (EFT), wire transfer, online bill payment, mobile payment applications, UPI, and credit/debit cards should reflect accurately in the recipient's account.	Select Yes/No

FPM.2. The system manages vendor payments.	
FPM.2.c: The system maintains a record of all payables and receivables.	
Test Case: Verify the capability of the system to maintain accurate records of all payables and receivables for vendors and customers.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff with authorization to access the finance management module should be logged in to the system. **2.** Create a dummy payable record for the vendor in the system. **3.** Create dummy receivable records for customers in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the payable functionality of the finance module. **Step 2.** Confirm that the system displays a list of all payables, including the essential details like supplier name, amount, and due date for each invoice. **Step 3.** Check details such as vendor name, transaction date, invoice number, amount, and payment/receipt method. **Step 4.** Add a new payable and confirm that it is added to the record of existing payables. **Step 5.** Check for any discrepancies or inaccuracies in the recorded data. **Step 6.** Perform steps 2 to 5 for the receivable records.	**1.** The system should maintain accurate records of all payables (vendor transactions) and receivables (customer transactions). **2.** Payables records should reflect outstanding amounts owed to vendors, including invoice details and payment statuses. **3.** Receivables records should reflect outstanding amounts due from customers, including invoice details and payment statuses. **4.** Record updates (e.g., invoice payments, and settlements) should be reflected in real-time within the system.	Select Yes/No

FPM.2. The system manages vendor payments.		
FPM.2.d: The system generates debit/credit notes for suppliers.		
Test Case: Verify the system's capability to generate debit notes and credit notes accurately for patient or insurance billing purposes.		
Pre-requisite for test		**Test Validation**
1. Healthcare staff with authorization to access the finance management module should be logged in to the system. **2.** Sample test data (e.g. patient information, services rendered, charges, and payment due) to create debit and credit notes should be available for testing purposes.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the finance management module. **Step 2.** Initiate the process to generate a debit note for a specific vendor. **Step 3.** Enter relevant details for the debit note such as services rendered, charges, and amount due. **Step 4.** Check that the system calculates the total amount owed accurately based on the provided information. **Step 5.** Check that the generated debit note contains all necessary details, including invoice number, date, description of services, and payment terms, and save it. **Step 6.** Confirm that the information captured in the debit note matches the data entered during the generation process by cross-checking with the real-time data. **Step 7.** Repeat steps 2 to 6 for credit note generation.	**1.** Healthcare staff can generate credit notes that include relevant information about receivable payments from patients or insurance companies. **2.** Healthcare staff can generate debit notes that include relevant information about payable payments to patients or insurance companies.	Select Yes/No

FPM.2. The system manages vendor payments.

FPM.2.e: The system configures individual supplier payment scheduling.

Test Case: Verify the system's capability to schedule payments to individual vendors at specified times, ensuring timely and automated processing without delays.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to access the payment module should be logged in to the system. **2.** Valid vendor details and payment authorization should be available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the payment functionality. **Step 2.** Select the vendor for whom the payment needs to be scheduled. **Step 3.** Enter the payment details, including Payment amount, payment method, scheduled payment date and time, Invoice, or reference number. **Step 4.** Check that the system allows the scheduling of payments for future dates. **Step 5.** Access the list of scheduled payments within the system. **Step 6.** Check that all scheduled payments are displayed along with relevant details such as vendor name, payment amount, scheduled date, and status. **Step 7.** Confirm that the system provides options to edit, cancel, or reschedule payments as needed. **Step 8.** Check for payment confirmation messages or notifications within the system after the scheduled payment execution. **Step 9.** Confirm with the vendor or recipient that the scheduled payment has been received and processed successfully. **Step 10.** Check and confirm that the system updates the payment status to reflect the successful completion of the scheduled transaction.	**1.** Healthcare staff should be able to specify payment details including vendor, payment method, amount, and scheduled date/time. **2.** Scheduled payments should be executed automatically and promptly at the specified times without manual intervention. **3.** Confirmation messages or notifications should be generated upon scheduling and successful execution of payments.	Select Yes/No

FPM.2. The system manages vendor payments.	
FPM.2.f: The system monitors and tracks vendor payables.	
Test Case: Verify the effectiveness and functionality of the vendor payment system in streamlining vendor bill payments and providing a digital dashboard for tracking payments.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff with authorization to access the payment module should be logged in to the system. **2.** Valid vendor details and payment authorization should be available. **3.** Create a payment for two dummy vendors in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the vendor payment section. **Step 2.** Create a new payment for a dummy vendor and save it. **Step 3.** Check that the payment is recorded correctly and the status is 'Pending'. **Step 4.** Go to the payments section. **Step 5.** Check that the newly created payment for the dummy vendor is displayed with the correct amount and status. **Step 6.** Check that the total payables are updated accordingly. **Step 7.** Update the status of the payment for the dummy vendor to 'Completed'. **Step 8.** Check that the status update is reflected correctly on the dashboard. **Step 9.** Delete a pending payment (e.g., payment for a dummy vendor). **Step 10.** Confirm that the payment is removed from the system and the dashboard updates the total payables. **Step 11.** Check the total payables on the dashboard. **Step 12.** Confirm that the dashboard provides updates on all vendor payments and total payables.	**1.** The vendor payment system should effectively streamline bill payments, ensuring accurate and timely transactions. **2.** The digital dashboard for tracking payments should provide a clear and comprehensive view of payment statuses and history. **3.** Real-time updates and detailed payment records should be accessible through the dashboard. **4.** The dashboard should allow users to navigate, search, and filter payment information effortlessly.	Select Yes/No

FPM.2. The system manages vendor payments.

FPM.2.g: The system issues notifications to the suppliers regarding their payment status.

Test Case: Verify the functionality and effectiveness of the supplier portal in sending notifications to suppliers regarding payment status or updates.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to access the vendor portal should be logged in to the system. **2.** Vendor contact information should be available in the system. **3.** Create a dummy payment for a vendor in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the supplier management module. **Step 2.** Search for and select a supplier with pending or processed payments. **Step 3.** Verify that the system displays the supplier's payment status, including: payment amount, payment date, and status (e.g., pending, completed, overdue). **Step 4.** Initiate the process to issue a notification regarding the payment status. **Step 5.** Confirm the system sends a notification to the supplier through the configured channels: Email, SMS, online messaging platform, etc. **Step 6.** Verify that the notification includes all the relevant information. **Step 7.** Check that the system logs the notification process, including timestamps and delivery status. **Step 8.** Confirm that the notifications are received by the supplier and contain accurate and clear information.	**1.** Suppliers are notified of their payment status. **2.** Notifications should be delivered promptly upon changes in payment status. **3.** Notification content should be informative, providing vendors with clear details about the status update.	Select Yes/No

FPM.3. The system performs patient billing functions.
FPM.3.a: The system configures rates for various services provided by healthcare organizations.
Test Case: Verify the system's capability to configure treatment packages with a comprehensive range of medical services at a set fixed price.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to access the treatment package configuration section should be logged in to the system. **2.** All the test data should be available including the treatment package.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the service rate configuration module in the system. **Step 2.** Select the option to configure rates for services. **Step 3.** Choose a service from the list of available services. **Step 4.** Verify that the system displays current rate details for the selected service. **Step 5.** Update or configure the rate for the selected service by entering a new rate or adjusting the existing rate. **Step 6.** Save the updated rate configuration. **Step 7.** Verify that the system confirms the successful update of the rate. **Step 8.** Check that the updated rate is reflected accurately in the system for the selected service. **Step 9.** Confirm that the system provides options to review or edit rates as needed. **Step 10.** Validate that the system logs the rate changes, including user details and timestamps, for auditing purposes.	**1.** Healthcare staff should be able to configure treatment package which provides comprehensive range of medical services at fixed prices.	Select Yes/No

FPM.3. The system performs patient billing functions.		
FPM.3.b: The system configures patient billing templates.		
Test Case: Verify the functionality of the standardized billing template configuration and print duplicate bills with watermarks but not more than twice in the system.		
Pre-requisite for test		**Test Validation**
1. Healthcare staff with authorization to configure billing templates should be logged in to the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the billing functionality. **Step 2.** Initiate the process to configure a standardized billing template. **Step 3.** Check that the system provides options to define the fields, and content elements for the billing template. (if applicable) **Step 4.** Confirm that the standardized billing template configuration supports the insertion/ editing of patient-specific details, billing codes, itemized charges, and payment information. **Step 5.** Generate a billing transaction and choose the configured template. Make sure a bill is generated successfully. **Step 6.** Check that the system indicates that the bill is a duplicate and distinguishes it, check that duplicate bills are clearly marked with watermarks or visual indicators to distinguish them from original bills. **Step 7.** Try to generate an interim bill. Confirm that the system clearly marks the interim bill and separates it from the final bill.	**1.** Healthcare staff should be able to configure billing templates as per the requirements to maintain consistency. **2.** Generated duplicate bill should have a watermark.	Select Yes/No

FPM.3. The system performs patient billing functions.	
FPM.3.c: The system generates estimates for the care/services rendered.	
Test Case: Verify the system's capability to generate accurate estimates for selected packages, including all parameters of the services rendered in hospitals.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff with authorization to access the billing module should be logged in to the system. **2.** Sample data and packages configured in the system for testing purposes.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the billing module. **Step 2.** Choose a specific package from the available options, such as consultation, surgery, or treatment packages. **Step 3.** Confirm that the selected package includes all relevant services and components, such as consulting physician fees, medication costs, surgery rates (if applicable), and room charges based on the average length of stay. **Step 4.** Enter any required details or parameters, such as patient information or specific package preferences. **Step 5.** Initiate the process to generate an estimate for the selected package. **Step 6.** Review the estimated amount generated by the system for the selected package. **Step 7.** Confirm that the estimate accurately reflects the total cost of all included services and components.	**1.** The system should accurately generate cost estimates for selected service packages in hospitals. **2.** Cost estimates should include all parameters and details of services rendered within the selected packages. **3.** The estimated costs should align with the predefined parameters and services outlined in the selected package.	Select Yes/No

FPM.3. The system performs patient billing functions.		
FPM.3.d: The system generates patient bills as per the goods and services provided.		
Test Case: Verify that the system can generate accurate patient bills based on the services provided.		
Pre-requisite for test		**Test Validation**
1. Healthcare staff with authorization to access billing should be logged in to the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the billing module in the system. **Step 2.** Select the option to generate a bill for a patient. **Step 3.** Choose the patient for whom the bill is to be generated. **Step 4.** Verify that the system displays a summary of the goods and services provided to the patient. **Step 5.** Ensure that the system includes all relevant details in the bill, such as descriptions of goods and services provided, cost, any discount, etc. **Step 6.** Confirm that the system calculates the total amount due. **Step 7.** Review the generated bill to ensure accuracy and completeness. **Step 8.** Save, print, or send the bill to the patient as needed. **Step 9.** Verify that the system provides options to review or modify the bill before finalization. **Step 10.** Ensure that the system logs the bill generation process, including user details and timestamps, for auditing purposes.	**1.** Patient details and the list of services rendered are displayed. **2.** All services are correctly listed with accurate details. **3.** A bill is generated with all the listed services and their respective costs. The total amount is calculated and displayed. **4.** The bill is confirmed, and a confirmation message is displayed. The bill status should update to "Generated" or "Confirmed". **5.** The bill is printed or saved successfully, and a confirmation message is displayed.	Select Yes/No

FPM.3. The system performs patient billing functions.		
FPM.3.e: The system supports payments through various digital payment modes.		
Test Case: The system should have the capability to allow payment through various digital payment modes.		
Pre-requisite for test		**Test Validation**
1. User should be logged in (as a patient) to the system with appropriate authorization.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the finance management section. **Step 2.** Choose the desired digital payment channel from the available options, including online payment portals and mobile payment applications. **Step 3.** Initiate the payment transaction through the selected digital payment channel. **Step 4.** Confirm that the payment request has been successfully processed and that a transaction reference or confirmation has been generated. **Step 5.** Confirm with the recipient that the payment has been received and processed successfully. **Step 6.** Check and confirm that the system updates payment status to reflect the successful completion of the transaction.	**1.** The system should facilitate digital payments through various online channels and portals. **2.** Users should receive confirmation messages or notifications after completing digital payment transactions through the system.	Select Yes/No

FPM.3. The system performs patient billing functions.
FPM.3.f: The system manages the patient's account and provides details on payment transactions and other relevant details to the patient.
Test Case: Verify the system's capability to manage patient accounts and provide billing details and payment information.

Pre-requisite for test		Test Validation
1. User with authorization to access the patient portal should be logged in to the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the patient account management module. **Step 2.** Search for and select the patient account to review. **Step 3.** Verify that the system displays comprehensive patient account details, including patient identification information (e.g., name, ID number), contact details, episode or stepwise billing details, including treatment charges and payment transactions, and outstanding balances or credits. **Step 4.** Confirm that the system captures and displays billing details for each episode or step of treatment. **Step 5.** Trigger notification alerts to patients through multiple communication channels. **Step 6.** Verify that the system provides detailed treatment charges and payment information through multiple communication channels: **Step 7.** Confirm that patients can download or print billing statements and payment receipts from the patient portal. **Step 8.** Check that the system logs any changes or updates to patient account details and communication for auditing purposes.	**1.** User (patient) should be able to view their payment status and other requested information within the patient portal.	Select Yes/No

FPM.3. The system performs patient billing functions.
FPM.3.g: The system has the capability to send out/receive system and workflow-related triggers.
Test Case: Verify that the HIS can handle system-related notifications from payors and workflow-related notifications to patients effectively while ensuring the privacy and security of patient information.

Pre-requisite for test	Test Validation
1. The HIS is able to communicate with the systems of healthcare payors to receive system-related notifications. 2. Patient contact information is correctly entered into the HIS for the notification delivery.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the HIS dashboard. **Step 2.** Simulate the receipt of a system-related notification from a payor (e.g., payment update, policy change). **Step 3.** Verify that the notification is received correctly by the HIS and logged with a timestamp. **Step 4.** Navigate to the patient communication module within the HIS. **Step 5.** Simulate the creation of a workflow-related notification to be sent to a patient (e.g., appointment reminder, test result availability). **Step 6.** Verify that the notification is correctly generated, ensuring it contains accurate information and adheres to privacy standards. **Step 7.** Send the notification to the patient and verify that it is delivered securely to the patient's designated communication channel (e.g., email, SMS, patient portal). **Step 8.** Check the HIS logs to ensure that both the received and sent notifications are documented, including any relevant security details (e.g., encryption status, and access logs). **Step 9.** Attempt to access the notification logs with unauthorized credentials and verify that access is denied, ensuring data security. **Step 10.** Log out from the HIS dashboard.	1. The HIS should successfully receive the scheduled downtime notification from the payor. 2. Authorized users should be able to view the system notification with accurate details. 3. The HIS should trigger a notification to the patient regarding the change in claim status. 4. The patient should receive a notification containing clear instructions. 5. The HIS should log the triggering and delivery of the workflow notification.	Select Yes/No

FPM.4. The system supports insurance payment functions.

FPM.4.a: The system captures patients' insurance details including their eligibility and coverage.

Test Case: Verify the capability of the system to perform insurance eligibility verification accurately and efficiently.

Pre-requisite for test	Test Validation
1. Healthcare staff with authorization to access the insurance eligibility verification module should be logged in to the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the patient management module in the system. **Step 2.** Select a patient record with valid insurance details. **Step 3.** Initiate the insurance eligibility verification process for the selected patient. **Step 4.** Verify that the system sends a request to the insurance provider or payor for eligibility verification. **Step 5.** Wait for the response from the insurance provider and verify that the system receives the eligibility status accurately (e.g., eligible, ineligible, coverage details). **Step 6.** Cross-check the eligibility information displayed by the system against the insurance provider's data to ensure accuracy. **Step 7.** If the patient is eligible, verify that the system correctly updates the patient record with the coverage details. **Step 8.** If the patient is ineligible, verify that the system flags the record and provides appropriate alerts or notifications to the user. **Step 9.** Repeat the process for multiple patients with different insurance providers to ensure consistency and efficiency across various scenarios.	**1.** The system confirms the insurance plan and policy number. **2.** The system displays coverage dates, copayments, deductibles, and any limitations or exclusions. **3.** A success message indicating that the insurance eligibility has been verified is displayed.	Select Yes/No

FPM.4. The system supports insurance payment functions.
FPM.4.b: The system enables easy patient authentication.
Test Case: Verify HIS system's capability to assist in smooth auto-verification of KYC documents via various digital modes available such as Digi Locker.

Pre-requisite for test	Test Validation
1. Patient records, treatment details, and final costs are available in the HIS system. **2.** Patient records are available in the HIS system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Select the patient record that requires KYC verification **Step 2.** Choose the option to verify KYC documents. Digi locker can be used if available. **Step 3.** Enter the patient's registered mobile number. **Step 4.** Initiate the OTP request to the patient's mobile number. **Step 5.** Enter the OTP received by the patient on their registered mobile number and submit. **Step 6.** Retrieve the patient's KYC documents upon successful OTP verification. **Step 7.** Display the retrieved documents in the HIS system for review. **Step 8.** Verify the retrieved documents against the patient's details. **Step 9.** Store the verified documents in the patient's record in the HIS system.	**1.** KYC documents are auto-verified via Digi Locker, or alternative verification methods are used. **2.** OTP issues are handled gracefully, and alternative options are provided.	Select Yes/No

FPM.4. The system supports insurance payment functions.		
FPM.4.c: The system captures pre-authorization details from the payor for planned treatment/procedures.		
Test Case: Verify HIS system's capability to initiate, process, and secure pre-authorization requests with payors.		
Pre-requisite for test		**Test Validation**
1. The HIS system has integration with the payor's system. **2.** Patient records and treatment plans are available in the HIS system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the pre-authorization module in the system. **Step 2.** Select the option to capture pre-authorization details from the payor. **Step 3.** Choose the dummy patient and planned treatment/procedure for which pre-authorization is required. **Step 4.** Verify that the system displays a form or interface for entering or receiving pre-authorization details. **Step 5.** Input or verify the following pre-authorization details from the payor: authorization number, authorization date, approved treatments/procedures, approved dates, or time frames. **Step 6.** Confirm that the system saves and associates the pre-authorization details with the patient's record and planned treatment/procedure. **Step 7.** Check that the system provides options to review or update the pre-authorization details as needed. **Step 8.** Verify that the system generates and displays a confirmation message or status indicating the successful capture of the pre-authorization details. **Step 9.** Confirm that the system logs the pre-authorization details capture process, including user details and timestamps, for auditing purposes.	**1.** The pre-authorization request and response are correctly logged in the HIS system. **2.** Patient information remains secure and confidential throughout the process.	Select Yes/No

FPM.4. The system supports insurance payment functions.	
FPM.4.d: The system captures the claim submission for the payors.	
Test Case: Verify HIS system's capability to initiate, process, and secure claims submission with payors.	
Pre-requisite for test	**Test Validation**
1. Patient records, treatment details, and final costs are available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Select the patient record for whom the claim is to be submitted. **Step 2.** Enter the necessary treatment details, including procedures, services, and the final cost of the treatment provided. **Step 3.** Attach supporting documentation (if applicable) (e.g., discharge summary, medical reports, itemized bills). **Step 4.** Submit the claim request to the payor by clicking the 'Submit' button. **Step 5.** Check the system for confirmation that the claim request has been transmitted to the payor. **Step 6.** Retrieve the claim response from the payor. **Step 7.** Access the claims functionality to view the status of the claim (e.g., approved, denied, pending). **Step 8.** Verify that the received claim details match the submitted request and include the final approved amount and any remarks. **Step 9.** Update the patient's financial record with the final claim status and approved amount.	**1.** The claim request and response are correctly logged in the HIS system.	Select Yes/No

FPM.4. The system supports insurance payment functions.		
FPM.4.e: The system checks the status of the requests.		
Test Case: Verify systems' capability to check the status of the requests (Coverage Eligibility, Pre-Authorization, Claims, etc.)		
Pre-requisite for test		**Test Validation**
1. The system is able to communicate with the Payor. **2.** Patient data is available for testing. **3.** Claim data should be available within the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the insurance module in the system. **Step 2.** Choose the type of request for which the status needs to be checked (e.g., Coverage Eligibility, Pre-Authorization, Claims). **Step 3.** Enter or select the request identifier (e.g., patient ID, request number) for which the status needs to be checked. **Step 4.** Verify that the system displays a search or query interface for the request status. **Step 5.** Execute the search or query to retrieve the status of the request. **Step 6.** Review the system's output to confirm it includes: request type, request identifier current status, additional details, or notes. **Step 7.** Ensure that the system provides options to view detailed information about the request status and update or modify request details **(if applicable)** **Step 8.** Verify that the system logs the status check process, including user details and timestamps, for auditing purposes. **Step 9.** Confirm that the system handles invalid or incomplete request identifiers by providing appropriate error messages.	**1.** The status check request is successfully sent from HIS to the payor system. **2.** The system receives and processes the status response accurately, displaying the latest status information.	Select Yes/No

FPM.4. The system supports insurance payment functions.	
FPM.4.f: The system notifies the patients about the status of their claims.	
Test Case: Verify the system's capability to send notifications to patients regarding their claim status accurately and efficiently.	
Pre-requisite for test	**Test Validation**
1. Healthcare staff with authorization to access insurance claim management should be logged in to the system. **2.** Create a dummy insurance claim record for the patient in the system. **3.** User (patient) with valid credentials should be available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the Insurance module. **Step 2.** As an administrator, select the dummy patient's claim from the system. **Step 3.** Make some changes to the patient's claim status and save. **Step 4.** Confirm that the system triggers the notification promptly and accurately. **Step 5.** Verify that the notification is delivered to the patient through the preferred communication channel, such as email, SMS, or patient portal (if configured). **Step 6.** Confirm that the notification includes relevant details about the claim status, such as approval, denial, pending review, or payment processed. **Step 7.** Log out of the system. **Step 8.** Log in as a patient into the patient portal. **Step 9.** Navigate to the claim status section of the patient portal. **Step 10.** Confirm that the claim status notification is accessible and displayed accurately within the patient portal interface. **Step 11.** Check and confirm that the notification provides all relevant information about the patient.	**1.** The patient receives a notification through digital platform about their insurance claim. **2.** The notification includes details such as claim ID, submission date, and a message confirming receipt. **3.** The same notification is accessible in the notifications section of the patient portal.	Select Yes/No

FPM.4. The system supports insurance payment functions.

FPM.4.g: The system receives payment reconciliation communication from the payor and responds to it.

Test Case: Verify that the system can effectively receive payment reconciliation notices from payors, process them, respond with the appropriate status, and maintain the privacy and security of patient information during the exchange.

Pre-requisite for test	Test Validation
1. The system is able to communicate with the payment systems of healthcare payors for receiving payment reconciliation notices. **2.** Adjudicated claims are available in the system for reconciliation.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to an existing notification from the payor. **Step 2.** Verify that the system successfully receives the payment reconciliation notice. **Step 3.** Ensure that the received notice includes details such as payment amount, claim IDs, and reconciliation period. **Step 4.** Confirm that the system logs the receipt of the payment reconciliation notice for audit purposes. **Step 5.** Ensure that the system reconciles the received payment information with the adjudicated claims. **Step 6.** Verify that the system allows the generation of a response to the payment reconciliation notice indicating the reconciliation status. **Step 7.** Ensure that the system sends the response to the payor within the specified timeframe. **Step 8.** Verify that the system logs the processing and response to the payment reconciliation notice for audit purposes.	**1.** The system should successfully receive and process the payment reconciliation notice from the payor. **2.** Payment records are updated and discrepancies are addressed. **3.** Patient information privacy and security are maintained throughout the process.	Select Yes/No

FPM.4. The system supports insurance payment functions.	
FPM.4.h: The system shows relevant dashboard(s) of all pre-authorization and claim statuses.	
Test Case: Verify the system's capability to provide dashboards displaying relevant information regarding pre-authorization requests and insurance claims.	
Pre-requisite for test	**Test Validation**
1. Healthcare providers or administrative staff with authorization to access the dashboard should be logged into the system. **2.** Pre-authorization requests and insurance claims data are available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the pre-authorization and claims management module. **Step 2.** Select the option to view pre-authorization dashboards. **Step 3.** Verify that the dashboard displays relevant metrics and information regarding pre-authorization. **Step 4.** Select the option to view claim status dashboards. **Step 5.** Verify that the dashboard displays relevant metrics and data for claims, including the number of claims submitted, the number of claims approved, the number of claims denied or rejected, and the average processing time for claims. **Step 6.** Check that both dashboards provide filtering options to view data by date range, claim type, or status. **Step 7.** Confirm that both dashboards are updated in real-time or near real-time to reflect the latest data. **Step 8.** Validate that the dashboards allow users to drill down into detailed views of individual pre-authorizations or claims. **Step 9.** Verify that the dashboards provide visual representations (e.g., charts, graphs) for better data analysis and interpretation.	**1.** The dashboard displays relevant information regarding pre-authorization requests and insurance claims in a clear and organized manner.	Select Yes/No

FPM.4. The system supports insurance payment functions.		
FPM.4.i: The system has the capability to submit health insurance claims via National Health Claims Exchange (NHCX).		
Test Case: Self-attestation		
Pre-requisite for test		**Test Validation**
		Self-attestation
Steps to produce	**Expected Outcome**	**Note/Deviation**
Self-attestation		Select Yes/No

Chapter 7 - Human Resource Management (HRM)

HRM.1. The system manages human resource administration.

HRM.1.a: The system captures personal and professional data (master data) related to medical and non-medical staff.

Test Case 1: Verify that the system captures personal and professional data related to medical and non-medical staff.

Pre-requisite for test	Test Validation
1. A healthcare staff/provider authorized to capture and manage master data including medical and non-medical staff is logged in to the system. **2.** Documentation of organization policies and requirements should be available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the staff management or human resources module. **Step 2.** Access the functionality to add or update staff information. **Step 3.** Enter personal data for a new dummy staff member, including name, date of birth, gender, contact information, and address. **Step 4.** Enter professional data for the dummy staff member, including job title, department, qualifications, certifications, years of experience, and employment start date. **Step 5.** Upload documents such as birth certificates and Aadhar card if required and save them in the system. **Step 6.** Retrieve the dummy staff member's record from the system to confirm that all personal and professional data is displayed correctly. **Step 7.** Edit the dummy staff member's data by updating or adding new information, then save the changes and verify that they are accurately reflected in the system. **Step 8.** Check that the system provides the option to assign various parameters to a selected staff such as assigning to a particular department, manager, duty hours, etc.	**1.** The system allows capturing of staff information.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Step 9. Retrieve staff records from the system and check that the updated information is accurately captured and displayed. **Step 10.** Check that the system provides the option to assign various parameters to a selected staff such as assigning to a particular department, manager, duty hours, etc. **Step 11.** Retrieve staff records from the system and check that the updated information is accurately captured and displayed.		

HRM.1. The system manages human resource administration.

HRM.1.a: The system captures personal and professional data (master data) related to medical and non-medical staff.

Test Case 2: Verify that the system configures and manages master data including staff information and professional record forms etc.

Pre-requisite for test	Test Validation
1. A healthcare staff/provider authorized to capture and manage master data including medical and non-medical staff is logged in to the system. **2.** Documentation of organization policies and requirements should be available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the master data management module within the system. **Step 2.** Access the functionality to configure master data related to staff information, such as adding or modifying data fields for personal and professional details. **Step 3.** Review the department attributes that are available, such as name, code, and description. **Step 4.** Customize the department master data based on organizational structure and requirements. This may include:	**1.** All the configurations to the master data are saved and reflected.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
a. Adding new departments. **b.** Modifying existing department details. **c.** Assigning department managers (optional). **d.** Save the configured department master data. **Step 5.** Perform a test scenario to ensure that the configured master data elements are functioning as expected. This may include: **a.** Assigning employees to departments. **b.** Updating employee details such as contact information and job titles. **c.** Configuring leave types and entitlements.		Select Yes/No

HRM.1. The system manages human resource administration.		
HRM.1.b: The system assigns unique IDs and role/s to each staff.		
Test Case: Verify that the system assigns a unique identifier for each employee within the organization, ensuring uniqueness and assigning role/s to each staff.		
Pre-requisite for test		**Test Validation**
1. A healthcare staff/provider authorized to generate and manage employee unique identifiers (Staff ID) is logged in to the system.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the section with the functionality to manage new staff entry. **Step 2.** Initiate the process of creating a new staff record. **Step 3.** Create multiple new staff records in the system. **Step 4.** Check and validate that each newly created staff record is assigned a unique staff ID. **Step 5.** Try generating a new staff record with the already existing ID. Confirm that the system does not allow to generate it, the system must ensure that the staff IDs generated are distinct and do not overlap with existing IDs in the system. **Step 6.** Verify that the system also provides the option to assign role/s to each staff record that is created.	**1.** The system assigns unique staff IDs and role/s to staff. **2.** Newly generated staff IDs are unique and not duplicated within the system.	Select Yes/No

HRM.1. The system manages human resource administration.		
HRM.1.c: The system has the capability to configure duty rules for the staff.		
Test Case: Verify that the system configures duty rules for the staff, captures and stores relevant staff scheduling data, and performs operations for efficient workforce scheduling.		
Pre-requisite for test		**Test Validation**
1. A healthcare staff authorized to configure duty rules for staff is logged in to the system. **2.** All the information required to configure duty rules for staff is available.		Manual
Steps to produce	**Expected Outcome**	**Note/Deviation**
Step 1. Navigate to the staff scheduling or workforce management module. **Step 2.** Access the functionality to configure duty rules for staff, including shift timings, break periods, overtime rules, and any other relevant scheduling policies. **Step 3.** Verify that the system correctly stores the configured duty rules and applies them when scheduling staff shifts. **Step 4.** Enter or import staff scheduling data, including shift assignments, days off, and any special scheduling considerations (e.g., night shifts, and weekend duty). **Step 5.** Save the scheduling data and verify that the system accurately captures and stores all relevant details for each staff member. **Step 6.** Test the system's ability to automatically generate staff schedules based on the configured duty rules, ensuring that the schedules comply with the set policies. **Step 7.** Modify the schedule for a staff member and save the changes, then verify that the system updates the scheduling data accurately without violating duty rules. **Step 8.** Check that the system provides options to view, edit, or delete staff schedules.	**1.** System configures duty rules for staff according to organizational requirements. **2.** Data is accurately captured and stored in the system. **3.** The system efficiently creates employee schedules that align with set templates, guidelines, and staff preferences.	Select Yes/No

HRM.1. The system manages human resource administration.
HRM.1.d: The system creates and manages roster for the working of staff.
Test Case: Verify that the system can efficiently create hospital staff rosters, including the functionality to input staff availability, assign shifts, and generate rosters based on predefined templates.

Pre-requisite for test	Test Validation
1. A healthcare staff authorized to access the hospital staff rostering system should be logged into the system. **2.** Staff profiles, including availability and qualifications, are set up in the system. **3.** Labor regulations should be configured in the system. **4.** Predefined templates for roster generation are available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section related to staff roster creation. **Step 2.** Open the roster creation form or function. **Step 3.** Input staff availability for the designated scheduling period, including days off, preferred shifts, and any constraints. **Step 4.** Assign shifts to available staff members. **Step 5.** Confirm that shifts are assigned based on staff availability, qualifications, and workload distribution requirements. **Step 6.** Configure the system to generate rosters for a specified time period, taking into account factors such as staff availability and labor regulations. **Step 7.** Validate that the generated rosters comply with predefined templates and accurately reflect staff availability and shift assignments. **Step 8.** Verify that the system supports the export or printing of the generated roster, ensuring that the information is complete and formatted correctly for distribution. **Step 9.** Check that the system is able to generate the roster automatically based on predefined rules. **(Optional)**	**1.** The rostering interface loads without errors and is user-friendly. **2.** Staff availability data is accurately captured and reflected in the system. **3.** Shifts are assigned to staff members based on their availability and preferences. **4.** The system efficiently generates staff rosters that meet the hospital's predefined template and rules.	Select Yes/No

HRM.1. The system manages human resource administration.	
HRM.1.e: The system communicates shift schedules to all staff.	
Test Case: Verify that the system has the functionality of communication, including the ability to facilitate staff communication regarding shift changes, swap requests, and important announcements.	
Pre-requisite for test	**Test Validation**
1. A healthcare staff authorized to staff management system should be logged into the system. **2.** All the information about the staff schedule should be available.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section related to staff rostering. **Step 2.** Open the form or function for submitting shift change requests. **Step 3:** Test the system's ability to facilitate the approval process for shift swap requests, ensuring that supervisors or managers can review and approve or deny requests. **Step 4.** Send a shift swap request from one staff member to another, and verify that the recipient receives the notification and can accept or reject the request. **Step 5.** Confirm that the system updates the roster automatically if a shift swap request is approved, ensuring accurate reflection of the new assignments. **Step 6.** Check that the system sends notifications or messages to staff members regarding their assigned shifts, including shift changes or updates. **Step 7.** Access the functionality to send important announcements or alerts to all staff members. **Step 8.** Check that the system supports sending announcements through multiple channels, such as email, SMS, in-app notifications, or display boards within the hospital, and confirm it by sending one dummy notification through one of the available mechanisms such as email, SMS, in-app notifications, or display boards.	**1.** The system should be able to accept a shift change request and process it. **2.** Staff members can send shift change notifications to affected parties. **3.** Staff members receive notifications promptly through their preferred communication channels.	Select Yes/No

HRM.1. The system manages human resource administration.
HRM.1.f: The system predicts staffing needs based on historical data and workload.
Test Case: Verify the functionality of the staffing prediction module, including configuring predictive models, entering historical data, and visualizing staffing requirements.

Pre-requisite for test	Test Validation
1. A healthcare staff authorized to access the prediction module should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the staffing section within the system. **Step 2.** Open the section for forecasting **Step 3.** Check that the historical data is available. If required, enter historical data into the desired input fields required for forecasting. **Step 4.** Validate that the system accurately captures and processes the entered data, including staffing levels, patient volumes, seasonal variations, and other relevant metrics. **Step 5.** Open the dashboard within the staffing section. **Step 6.** Check that healthcare staff/providers can visualize forecasted staffing requirements through interactive charts, graphs, or tables. **Step 7.** Compare forecasted staffing requirements generated by the system with actual staffing levels over a specified time period. **Step 8.** Simulate a scenario where staffing levels deviate from the predicted pattern or immediate adjustments are needed due to sudden changes in patient volume. (Optional) **Step 9.** Check that the system is able to send alerts and notifications to administrator when staffing level deviate from the predicted pattern or when immediate adjustments are needed based on sudden changes in patient volume. **(Optional)**	**1.** Healthcare staff can configure predictive models tailored to organizational needs. **2.** The system generates staffing predictions based on configured models and historical data.	Select Yes/No

HRM.1. The system manages human resource administration.	
HRM.1.g: The system manages staff attendance and maintains records.	
Test Case: Verify the functionality of the attendance recording system, including the options for recording staff attendance, accessibility of real-time attendance data, and synchronization with other applications.	
Pre-requisite for test	**Test Validation**
1. A healthcare staff/provider authorized to access the attendance recording system should be logged into the system. **2.** Staff members' profiles and relevant attendance settings are correctly configured in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the attendance module. **Step 2.** Select the option to record attendance. **Step 3.** Input the attendance details for a dummy staff member, including the date, time in, and time out. **Step 4.** Save the attendance record. **Step 5.** Verify that the attendance is recorded correctly in the system. **Step 6.** Select a date range to view real-time attendance data for all staff. **Step 7.** Verify that the real-time attendance data is displayed accurately, reflecting the most recent attendance records. **Step 8.** Trigger the synchronization process with external applications (e.g., payroll system). **Step 9.** Verify that the attendance data is correctly synchronized with the connected applications. **Step 10.** Check the external application to confirm that the synchronized data matches the recorded attendance data.	**1.** Attendance is successfully recorded, and a confirmation message is displayed. **2.** Leave application is successfully submitted, and a confirmation message is displayed. Leave status should update to "Pending" or "Approved" based on workflow. **3.** Leave balance reflects the deducted days if the leave is approved or remains the same if the leave is pending.	Select Yes/No

HRM.1. The system manages human resource administration.	
HRM.1.h: The system maintains performance appraisal ratings for all the hospital staff.	
Test Case: Verify the system's capability to maintain performance appraisal ratings for all the hospital staff.	
Pre-requisite for test	**Test Validation**
1. The administrator must be logged into the system with appropriate permissions to manage the performance appraisal section. **2.** Keep a dummy staff record present in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the Performance Appraisal section of the system. **Step 2.** Click on the "Add New Appraisal" button. **Step 3.** Select the staff member from the list or enter their ID. **Step 4.** Enter the appraisal period (e.g., Q1 2024). **Step 5.** Rate various performance criteria (e.g., punctuality, job knowledge, teamwork, etc.). **Step 6.** Enter any additional comments or feedback. **Step 7.** Save the appraisal and confirm it is saved in the system. **Step 8.** Navigate to the Performance Appraisal section of the system. **Step 9.** Search for the staff member by name or ID. **Step 10.** Select the staff member to view their appraisal history and confirm that the system shows the expected results.	**1.** The system should save the new performance appraisal rating without errors. **2.** The system should display a list of all performance appraisals for the selected staff member.	Select Yes/No

HRM.1. The system manages human resource administration.
HRM.1.i: The system has the capability to calculate, maintain, and share staff payroll.
Test Case: Verify the system's capability to accurately calculate and share staff payroll based on configured rules, including attendance, leaves, deductions, and other payroll-related parameters.

Pre-requisite for test	Test Validation
1. A healthcare staff/provider authorized to access the payroll/HR module should be logged into the system. **2.** Relevant rules for attendance, leaves, deductions, and other payroll-related parameters are configured as per the requirements. **3.** Dummy staff information including attendance records, leave balances, and other relevant data should be available for testing. (Minimum 2 Set)	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the payroll section. **Step 2.** Enter attendance data for dummy staff members, including work hours, overtime, and leave records, and save it in the system database. **Step 3.** Initiate the payroll calculation process within the system. **Step 4.** Check the gross salary calculation, including salary components, allowances, deductions, and additional components (E.g., Bonuses or incentives) in the payroll calculations. **Step 5.** Open payroll reports are accessible, including individual staff pay slips and summary reports. **Step 6.** Check and confirm the accuracy of payroll reports by comparing calculated salaries with expected values based on configured rules and input data. **Step 7.** Check the system's ability to share pay slips with employees (if applicable). **Step 8.** Check that pay slips accurately reflect each staff member's calculated salaries, deductions, and allowances.	**1.** A healthcare staff/provider is able to compute and distribute staff payroll as per the configured rules and parameters. **2.** The system is able to generate pay slips.	Select Yes/No

HRM.2. The system manages recruitment and exit-related activities.
HRM.2.a: The system configures and manages rules to manage the staff recruitment process.
Test Case: Verify that the system is capable of configuring and managing rules for recruitment.

Pre-requisite for test	Test Validation
1. A healthcare staff/provider authorized to manage the staff recruitment should be logged into the system. **2.** Dummy staff records should be available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the Recruitment Rules section of the system. **Step 2.** View the list of recruitment rules. **Step 3.** Try and edit a rule or create a new rule. **Step 4.** Save it in the system. **Step 5.** Initiate onboarding of a dummy staff in the system. **Step 6.** Check that the system manages the onboarding according to the configured rules. **Step 7.** Check that the triggers for various processes like background verification, and documentation are displayed while trying to onboard a new staff.	**1.** A healthcare staff is able to configure and manage staff recruitment processes and rules as per the organizational requirements. **2.** The test scenario should work as per the configured staff recruitment process and rules.	Select Yes/No

HRM.2. The system manages recruitment and exit-related activities.
HRM.2.b: The system configures and manages rules for staff exit process.
Test Case: Verify that the system is capable of configuring and managing the staff exit process.

Pre-requisite for test	Test Validation
1. A healthcare staff/provider authorized to manage the staff exit process should be logged into the system. **2.** Dummy staff records should be available in the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the staff management section. **Step 2.** Select the option to configure exit process rules. **Step 3.** Check the available rule components such as: **a.** Notification triggers for resignation or termination. **b.** Clearance procedures for returning company assets. **c.** Access revocation of system accounts and physical premises. **d.** Final settlement calculations and payment processing. **Step 4.** Customize the exit process rules based on organizational requirements. **Step 5.** Save the configured exit process rules. **Step 6.** Check that the configured rules are updated.	**1.** A healthcare staff is able to configure and manage staff exit processes and rules as per the organizational requirements. **2.** Test scenario should work as per the configured staff exit process and rules.	Select Yes/No

HRM.3. The system manages the training needs of the staff.
HRM.3.a: The system maintains records of induction training and feedback of the new joiners.
Test Case: Verify the functionality and effectiveness of the system's capability to capture induction status and feedback from new joiners.

Pre-requisite for test	Test Validation
1. A healthcare staff authorized to access and update induction status and feedback should be logged into the system. **2.** All the information required to register new dummy staff into the system should be available for testing. **3.** Valid credentials to log into the system as a new employee (Dummy staff) should be available at the time of testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the employee onboarding section. **Step 2.** Register a dummy new joiner in the system and enter all essential details such as name, position, start date, and assigned onboarding activities. **Step 3.** Start the onboarding process of new joiners and assign induction tasks or activities as required. **Step 4.** Check and confirm, as an administrator that the system provides an option to monitor the status of the induction (E.g. progress, pending, and completed). **Step 5.** Log into the system as a dummy new joiner. **Step 6.** Check that new joiners can access the induction program details, training, and feedback form or survey within the onboarding module. **Step 7.** Fill feedback form and enter all the relevant information such as satisfaction levels, clarity of information, effectiveness of training materials, and suggestions for improvement and save.	**1.** The induction module is accessible and intuitive, allowing healthcare staff to navigate and update induction status easily. **2.** Induction status updates are reflected accurately in the system for each new joiner. **3.** Feedback from new joiners is captured comprehensively, including ratings and comments on various aspects of the induction process. **4.** The system provides accurate reports or dashboards summarizing induction status and feedback, enabling stakeholders to make informed decisions and improvements.	Select Yes/No

HRM.3. The system manages the training needs of the staff.
HRM.3.b: The system creates and manages training calendars for the staff.
Test Case: Verify the functionality and effectiveness of the system's capability to create and manage a training calendar for hospital staff.

Pre-requisite for test	Test Validation
1. A healthcare staff/provider authorized to access and manage the training calendar should be logged into the system. **2.** All the information required to create a training calendar should be available for testing.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the training management module in the system. **Step 2.** Select the option to create a new training calendar. **Step 3.** Define training sessions, including titles, descriptions, trainers, dates, and times. **Step 4.** Assign the relevant staff members to the training sessions based on their roles and departments. **Step 5.** Save the training calendar and verify that it displays all scheduled sessions correctly. **Step 6.** Verify that the system allows for updates to the training calendar, such as rescheduling sessions, changing trainers, or adding new sessions. **Step 7.** Update a training session and verify that the changes are reflected accurately in the calendar. **Step 8.** Notify the assigned staff members about their upcoming training sessions and verify that the system sends the notifications correctly. **Step 9.** Track staff attendance for each training session by marking attendance in the system after the session is completed. **Step 10.** Save the attendance records and verify that the system updates the staff training history accordingly. **Step 11.** Attempt to generate a report summarizing the training sessions conducted, staff attendance, and training outcomes. **Step 12.** Verify that the report accurately reflects the training calendar, attendance, and outcomes.	**1.** New training events can be created with all required details accurately captured. **2.** Existing training events can be edited, updated, or removed without any issues. **3.** The calendar provides options to view events by date or category, facilitating easy navigation and filtering.	Select Yes/No

HRM.3. The system manages the training needs of the staff.	
HRM.3.c: The system supports scheduling of the training programs for the staff.	
Test Case: Verify the functionality of the system's capability to capture attendance, collect feedback, and generate reports on training programs attended by staff members.	
Pre-requisite for test	**Test Validation**
1. The system has recorded data on the training programs scheduled. **2.** A healthcare staff authorized to access and generate reports should be logged into the system.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the training management module in the system. **Step 2.** Select a scheduled training session and mark attendance for staff. Confirm that the attendance is recorded for all staff who attended the program. **Step 3.** Navigate to the feedback collection section. **Step 4.** Send out feedback forms/links to staff through any channel and make sure that the feedback is reflected in the system. **Step 5.** Start the process of generating a report for training activity. **Step 6.** Select the desired fields to include in the report. This can consist of participant names, training session dates, attendance status, and feedback ratings. **Step 7.** After selecting/entering all the information, save it in the system. **Step 8.** Select an option to generate reports in desired formats such as pdf, or Excel. **Step 9.** Review the generated report to ensure it provides insights into the effectiveness of the training program, including attendance rates, satisfaction levels, or areas for improvement.	**1.** The system has the capability to capture attendance, feedback and generate reports for trainings.	Select Yes/No

Chapter 8 - Information Management Systems (IMS)

IMS.1. The system supports healthcare data and interoperability standards for patient, clinical, administrative information to ensure continuity of care, including ABDM.

IMS.1.a: The system should have the capability to support minimum set of administrative and clinical ABDM FHIR profiles to exchange data with other systems.

Test Case: This test case verifies that the system can support and exchange the minimum set of administrative and clinical ABDM (Ayushman Bharat Digital Mission) FHIR (Fast Healthcare Interoperability Resources) profiles with other systems.

Pre-requisite for test		Test Validation
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External Certification	Confirmation of ABDM Certification	Select Yes/No

IMS.1. The system supports healthcare data and interoperability standards for patient, clinical, administrative information to ensure continuity of care, including ABDM.

IMS.1.b: The system supports an extended set of clinical ABDM FHIR profiles to exchange data with other systems.

Test Case: Support for Extended Set of Clinical ABDM FHIR Profiles.

Pre-requisite for test		Test Validation
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External Certification	Confirmation of ABDM Certification	Select Yes/No

IMS.1. The system supports healthcare data and interoperability standards for patient, clinical, administrative information to ensure continuity of care, including ABDM.		
IMS.1.c: The system supports an advanced set of clinical ABDM FHIR profiles to exchange data with other systems.		
Test Case: Support for Advanced Clinical ABDM FHIR Profiles.		
Pre-requisite for test		**Test Validation**
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External Certification	Confirmation of ABDM Certification	Select Yes/No

IMS.1. The system supports healthcare data and interoperability standards for patient, clinical, administrative information to ensure continuity of care, including ABDM.		
IMS.1.d: The system has the capability to integrate with NHCX ABDM to submit and track health insurance claims.		
Test Case: Support for NHCX ABDM FHIR Profiles.		
Pre-requisite for test		**Test Validation**
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External Certification	Confirmation of ABDM Certification	Select Yes/No

IMS.1. The system supports healthcare data and interoperability standards for patient, clinical, administrative information to ensure continuity of care, including ABDM.

IMS.1.e: The system supports ICD 10/11 or SNOMED CT covering clinical terminologies for diagnosis, morbidity and mortality data accurately.

Test Case: Verify that the system supports ICD 10/11 coding for accurate diagnosis, morbidity, and mortality data, including prompting relevant codes and implementing coding capabilities.

Pre-requisite for test	Test Validation
1. The system should be configured to support the ICD-10 or ICD-11 code set. **2.** Test data prepared with various diagnosis, morbidity, and mortality records using ICD-10 and ICD-11 codes. **3.** User roles and permissions configured to access and manage clinical terminologies. **4.** The system should be configured to support the SNOMED CT (Clinical Terms) coding system. **5.** Test data prepared with various clinical records using SNOMED CT codes.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Scenario 1: For ICD **Step 1.** Create sample clinical records including diagnosis, morbidity, and mortality data using ICD-10 codes. **Step 2.** Manually enter sample records with ICD-10 codes into the system. **Step 3.** Validate that the system accepts and correctly stores the entered codes. **Step 4.** Perform searches for specific diagnosis, morbidity, and mortality data using ICD-10 codes. **Step 5.** Verify that deprecated codes are no longer available for selection in the diagnosis entry screen. **Step 6.** Ensure the system accurately retrieves and displays the corresponding records.	**Scenario 1:** **1.** The system prompts and recommends the correct ICD 10/11 codes based on diagnosis keywords. **2.** The system allows for accurate manual entry and storage of ICD 10/11 codes. **3.** The system supports the upload, upgrade, deprecation, and storage of ICD 10/11 codes by version.	Select Yes/No

Steps to produce	Expected Outcome	Note/Deviation
Scenario 2: For SNOMED **Step 1.** Ensure and verify that the latest SNOMED CT codes are loaded into the system. **Step 2.** Input the SNOMED CT code into a patient record **Step 3.** Save the code against the patient record **Step 4.** Ensure the system accurately retrieves and displays the corresponding records with the correct SNOMED CT codes. **Step 5.** Use the system to search for medical terms using SNOMED CT codes and descriptions **Step 6.** Validate that the system accepts and correctly stores the entered SNOMED CT codes.	**4.** Outbound FHIR messages are correctly populated with ICD 10/11 codes. **Scenario 2:** **1.** The system correctly supports and configures the SNOMED CT coding system. **2.** Sample records with SNOMED CT codes are successfully entered and stored in the system. **3.** Searches for specific SNOMED CT codes accurately retrieve the corresponding records.	Select Yes/No

IMS.1. The system supports healthcare data and interoperability standards for patient, clinical, administrative information to ensure continuity of care, including ABDM.
IMS.1.f: The system supports laboratory tests and observation terminologies and implements coding of lab with LOINC codes.
Test Case: Support for LOINC Codes.

Pre-requisite for test	Test Validation
1. The user (e.g., a healthcare provider or authorized personnel) must be logged into the system. **2.** The system must have access to the LOINC code database. **3.** The user should have the necessary permissions to use and manage LOINC codes.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the section of the system where LOINC codes are used or managed (e.g., lab test ordering, clinical documentation). **Step 2.** Use the search functionality to find a specific LOINC code by entering the code, part of the code, or description. **Step 3.** Verify that the system displays accurate details for the searched LOINC code, including code, name, class, and components. **Step 4.** Enter clinical data using LOINC codes (e.g., record a lab test result using the appropriate LOINC code). **Step 5.** Save the clinical documentation that includes the LOINC code. **Step 6.** Retrieve and display the clinical data that includes the LOINC code to verify that it is stored and displayed correctly.	**1.** The user should be able to navigate to the section where LOINC codes are used or managed. **2.** The search functionality should accurately find and display the LOINC code details. **3.** The system should provide detailed and accurate information for each LOINC code. **4.** The user should be able to enter and save clinical data using LOINC codes without errors. **5.** The saved clinical documentation should correctly include the LOINC code and display it accurately when retrieved.	Select Yes/No

IMS.1. The system supports healthcare data and interoperability standards for patient, clinical, administrative information to ensure continuity of care, including ABDM.

IMS.1.g: The system supports DICOM (Digital Imaging and Communications in Medicine) standards for imaging datasets.

Test Case: Support for DICOM Standards.

Pre-requisite for test	Test Validation
1. Upload sample DICOM files into the system. **2.** Access to DICOM-compliant medical imaging equipment or test data. **3.** Network connectivity for transferring DICOM files. **4.** User roles and permissions configured to access and manage medical imaging data.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Ensure the system is configured to support DICOM standards. **Step 2.** Obtain sample DICOM files from medical imaging equipment or a DICOM test data repository. Ensure the sample files cover various modalities (e.g., CT, MRI, X-ray). **Step 3.** Validate that the system accepts, stores, and correctly indexes the DICOM files. **Step 4.** Data Retrieval and Viewing: Retrieve DICOM files from the system using search criteria (e.g., patient ID, study date). **Step 5.** Use the system's DICOM viewer to display the retrieved images. **Step 6.** Verify that the images are displayed correctly with all associated metadata. **Step 7.** Data Integration and Exchange: Export DICOM files from the system to an external DICOM-compliant system. **Step 8.** Import DICOM files into the system from an external DICOM-compliant system. **Step 9.** Verify that the data is accurately exchanged without loss or alteration.	**1.** The system correctly supports DICOM standards and configurations. **2.** Sample DICOM files are successfully uploaded, stored, and indexed in the system. **3.** Searches for DICOM files accurately retrieve the corresponding images. **4.** The system's DICOM viewer correctly displays the retrieved images with all associated metadata.	Select Yes/No

IMS.1. The system supports healthcare data and interoperability standards for patient, clinical, administrative information to ensure continuity of care, including ABDM.

IMS.1.h: The system supports SNOMED CT or NRCeS Drug Registry for coding of drugs and devices.

Test Case: Verify that the system supports SNOMED CT or NRCeS Drug Registry for coding of drugs and devices.

Pre-requisite for test	Test Validation
1. The system is installed and operational. **2.** The system should be configured to support the SNOMED CT (Clinical Terms) coding system. **3.** Test data prepared with various clinical records using SNOMED CT codes. **4.** User roles and permissions configured to access and manage clinical terminologies.	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Ensure and verify that the latest SNOMED CT codes are loaded into the system. **Step 2.** Input the SNOMED CT code into a patient record. **Step 3.** Save the code against the patient record. **Step 4.** Ensure the system accurately retrieves and displays the corresponding records with the correct SNOMED CT codes. **Step 5.** Use the system to search for medical terms using SNOMED CT codes and descriptions. **Step 6.** Validate that the system accepts and correctly stores the entered SNOMED CT codes.	**1.** The system correctly supports and configures the SNOMED CT coding system. **2.** Sample records with SNOMED CT codes are successfully entered and stored in the system. **3.** Searches for specific SNOMED CT codes accurately retrieve the corresponding records	Select Yes/No

IMS.2. The system has the capability to support NABH-defined key performance indicators and analytical dashboards.

IMS.2.a: The system electronically computes and publishes Key Performance Indicators (KPIs) per NABH accreditation standards for hospitals and healthcare organizations.

Test Case: Verify the system's capability to compute and publish KPIs as per NABH standards, with export functionality.

Pre-requisite for test	Test Validation
1. The healthcare provider should be logged into the system. **2.** Relevant patient and administrative data are available in the system. **3.** The list of KPIs and the export format are accessible (Annexure XXX).	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the KPI computation module. **Step 2.** Choose the relevant KPIs to compute based on NABH accreditation standards. **Step 3.** Define the period for computation by selecting the start and end dates. **Step 4.** Execute the computation process. **Step 5.** Verify that the system accurately computes the KPIs based on the selected period and available data. **Step 6.** Review the computed KPIs displayed by the system. **Step 7.** Ensure the KPIs align with the NABH accreditation standards and reference Annexure XXX. **Step 8.** Select the option to export KPI data. **Step 9.** The desired format for export (JSON). **Step 10.** Export the KPI data and underlying computation to the selected format. **Step 11.** Open the exported file in the chosen format. **Step 12.** Verify that the KPI data and computations are correctly exported and formatted according to Annexure XXX.	**1.** The system accurately computes KPIs based on the selected period and NABH standards. **2.** The computed KPIs are displayed correctly and align with the NABH accreditation standards. **3.** The system successfully exports KPI data in the selected format, with accurate data and proper formatting as per Annexure XXX.	Select Yes/No

IMS.2. The system has the capability to support NABH-defined key performance indicators and analytical dashboards.

IMS.2.b: The system electronically computes and publishes Key Performance Indicators (KPIs) per NABH Digital Health Standard (DHS).

Test Case: Verify that the system electronically computes and publishes Key Performance Indicators (KPIs) as per NABH Digital Health Standard (DHS), with the ability to export KPI data in various formats.

Pre-requisite for test	Test Validation
1. The healthcare provider should be logged into the system. **2.** Relevant patient and administrative data are available in the system. **3.** The list of KPIs and the export format are accessible (Annexure XXX).	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the KPI computation module. **Step 2.** Choose the relevant KPIs to compute based on the NABH Digital Health Standard (DHS). **Step 3.** Define the period for computation by selecting the start and end dates. **Step 4.** Execute the computation process. **Step 5.** Verify that the system accurately computes the KPIs based on the selected period and available data. **Step 6.** Review the computed KPIs displayed by the system. **Step 7.** Ensure the KPIs align with the NABH Digital Health Standard (DHS) and reference Annexure XXX. **Step 8.** Select the option to export KPI data. **Step 9.** Choose the desired format for export (JSON). **Step 10.** Export the KPI data and underlying computation to the selected format. **Step 11.** Open the exported file in the chosen format. **Step 12.** Verify that the KPI data and computations are correctly exported and formatted according to Annexure XXX.	**1.** The system accurately computes KPIs based on the selected period and NABH Digital Health Standard (DHS). **2.** The computed KPIs are displayed correctly and align with the NABH DHS. **3.** The system successfully exports KPI data in the selected format, with accurate data and proper formatting as per Annexure XXX.	Select Yes/No

IMS.2. The system has the capability to support NABH-defined key performance indicators and analytical dashboards.
IMS.2.c: The system has the capability to publish NABH KPIs data every quarter as per the format defined by NABH.
Test Case: Verify that the system can publish NABH KPIs data every quarter in the format defined by NABH.

Pre-requisite for test	Test Validation
1. The healthcare provider should be logged into the system. **2.** The system is configured with the correct NABH Digital Health Standard (DHS) parameters. **3.** Relevant patient and administrative data are available in the system. **4.** The list of KPIs and the format for exporting KPI data to NABH are accessible (refer to Annexure XXX).	Manual

Steps to produce	Expected Outcome	Note/Deviation
Step 1. Navigate to the KPI computation module. **Step 2.** Select the end-user-defined period (e.g., the previous quarter) for which the KPIs need to be computed. **Step 3.** Initiate the computation of KPIs based on the selected date range. **Step 4.** Ensure that the system correctly computes the KPIs as per NABH DHS, including all required metrics listed in Annexure XXX. **Step 5.** Export the computed KPIs in the specified formats (JSON, .csv, .xml, .xls, .pdf) and verify that the data is accurate and matches the computed KPIs. **Step 6.** Trigger the system to publish the quarterly KPIs. **Step 7.** Verify that the KPIs are published in the correct format as defined by NABH. **Step 8.** Ensure that the published KPIs are accessible to authorized personnel. **Step 9.** Validate that the published data aligns with NABH requirements and that the system logs the publishing event with a timestamp.	**1.** The system should successfully compute and publish the NABH KPIs every quarter as per the defined format. **2.** The exported and published data should be accurate and in compliance with NABH Digital Health Standards.	Select Yes/No

IMS.3. The system complies with Information Security (ISO 27001:2022) and Safety and Security of Health Software Products (ISO 82304) standards.		
IMS.3.a: The system complies with ISO 27001 – 2022 information security standards.		
Test Case: Verified by external certification.		
Pre-requisite for test		**Test Validation**
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External certification	Confirmation of ISO 27001- 2022 Certification	Select Yes/No

IMS.3. The system complies with Information Security (ISO 27001:2022) and Safety and Security of Health Software Products (ISO 82304) standards.		
IMS.3.b: The system adheres to ISO 82304 health software standards.		
Test Case: Verified by external certification.		
Pre-requisite for test		**Test Validation**
		External Certification
Steps to produce	**Expected Outcome**	**Note/Deviation**
External certification	Confirmation of ISO 82304 certification.	Select Yes/No

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