**UnitedHealth Group**

**Description:** UnitedHealth Group offers online tools and services that provide helpful information to help you make important choices for you and your family. Choosing a Plan helps you to choose from coverage advisor, need to buy insurance, information about UnitedHealth Group plans. The main choices are: Selecting a provider – helps finding a doctor, hospital comparison tool, Planning your costs - Treatment Cost Estimator, Drug Pricing Tool, Managing your plan - [My Account](http://www.carefirst.com/myaccount), [Pay My Bill](https://www.carefirst.com/paymybill/quickpay/QuickFormInstruction.do) and Health Risk Assessments by [My Care First](http://www.carefirst.com/redirects/MyCareFirstRedirect.html), My Health Profile and [Options](http://www.carefirst.com/membsvcs/html/AlternativeTherapiesLanding.html): Save up to 50% on fitness club memberships.

**UnitedHealth Group** is the largest health care insurer in the Mid-Atlantic region, serving nearly 3.4 million members. **My Account** gives customers information about their health insurance online, so they can have access to important information. The member can register and Login. Once logged in, from the welcome page one can access all the features of My Account, such as Who’s Covered, What’s Covered, Claims and Out-of-Pocket Costs, contact Member Services by secure e-mail. All pages of My Account are secure—this means that sensitive information is encrypted and is unreadable as it travels over the Internet.

UnitedHealth Group

**“**UnitedHealth Group **Employer Portal”** would allow groups to perform administrative functions on-line, including employee coverage, adding dependents and checking plan benefits. This portal will focus on web-enabled transactions that provide employers with convenient and cost-effective service. A transaction-driven portal will help accomplish the dual goals of meeting customer information and service needs and fulfilling Empire’s commitment to reduce operational overhead. By enabling customers to smoothly perform necessary transaction at their convenience, UnitedHealth Group will alleviate pressure on customer service representative and reduce costs associated with labor-intensive customer management and support activities.

**“**UnitedHealth Group **Physicians Portal”** enables doctors in UnitedHealth Group’s networks to confirm patient eligibility, obtain pre-certification and adjudicate claims on-line in seconds. Claims to be processed real-time in the physician’s office at the time service are rendered. Physician can request check and EOB Copies, Check status of claims, Manage virtual practices through the Account Maintenance Feature.

**“**UnitedHealth Group **member website”** access to their health insurance information. Member can view their enrollment profile, Change Profile Info, Change their primary care physician, search a provider, view Benefit Details, View/Download/Print Explanation of Benefits form, check claim status and payment and request replacement ID Cards.

**Use the following Kaiser Permanente Project as UnitedHealth Group Project:**

**Kaiser Permanente** is an integrated [managed care](http://en.wikipedia.org/wiki/Managed_care) organization, based in [Oakland, California](http://en.wikipedia.org/wiki/Oakland,_California). **My Health Manager** program helps customers to access health and health plan information in one safe, convenient place on Kaiser Permanente Website. IT allows customers to E-mail doctors, get information about health practitioners, select personal physician. It helps to see test results, order prescription refills online or check the status of a **prescrip**tion refill, schedule, cancel, or view upcoming appointments, past visit information, download forms, Exchange secure e-mail with doctor's office, member services, and Web Manager.

**The Company I am currently working is Kaiser Permanente and is at Silver Spring, MD. It is an integrated managed health care organization. HealthConnect is Kaiser Permanente’s comprehensive health information system. It securely connects 8.5 million people to their health care teams, their personal information, and the latest medical knowledge, leveraging the integrated approaches to health care available only at Kaiser Permanente.**

**The project is web based and I was involved in the new functionality implemented in KP application. It is about self-scheduling intended for KP members to schedule their own appointment online with their Primary care physician (PCP), which allows KP members to schedule their appointment, view the upcoming appointment, reschedule the appointment or delete the appointment online, users will be also notified about their appointment via email. Following tasks were performed in all test environments to test the new schedule feature:**

* **Exectued the workflow of scheduling a Primary care physician appontment in KP.org test environment for the test member and verified that the appointment is created in KP Healthconnect (Main Interface) on that member's record.**
* **Scheduled another appointment from KP Healthconnect schedule and verified that the appointment is displaying in member's future appointment list in KP.org.**
* **Cancelled a scheduled appointment from KP.org and verified that the members record is updated as well in KP Healthconnect.**
* **Ordered a lab associated with the appointment and sent it to the lab system (Missys) from KP Healthconnect and verifed that MisSys system received the order.**
* **Check the result of the lab order in Missys and verifed that the result status in Healthconnect for that order is updated as "Complete" and result detail is also available.**
* **Verified that the same result is also available for members to see at KP.org.**
* **Ordered a medication from KP healthconnect for the same appointment and verifed that MCPS (Pharmacy System) received the order.**
* **Filled the medication request from MCPS (pharmacy system) and sent it to KP Healthconnect and verified that medication order result is updated in patient's chart in Healthconnect.**
* **Queried the relational database (Clarity?) next day after the ETL (Extract, transform and Load) process captures all data from Chronicles database to Clarity database in order to see all the information entered for the test member is populated in the correct tables.**
* **Checked functioning of other application connected to Healthconnect that is impacted by the new feature/module.**

All the applications are connected to KP HealthConnect using the Enterprise Middleware(MQ). On the back end, there is a procedural Database called Chronicles which is updated realtime. Furthermore, there is another relational database which is updated overnight after (extracting transforming and loading) ETL process

Individual from business department provided the requirement from a national level and regional business analyst modify and update the document based on regional guidelines. This document is generated with detailed information and it is called **BRD**. Then **System Analyst** converts **BRD to SRD.** They also prepare **navigational flow** **(a document that describes system behavior from an actor's point of view as scenario-driven threads through the functional requirements)** of the application in the form of **use cases.** It was documented in a way that it can be accessible by the relevant staff. Our team led collected those documents & updated to the test team by attending the **walk-thru(s) & meetings.**  
  
Later, **technical specification** team defined the **limitation, validation, error message, boundary values, and data types** of the application. After that **Database designer** designs the database and they come up with data dictionary document to create the schema for the application. Meanwhile, **GUI Designers** designed the look and feel of the application in the form of **mockups (also called prototype is a** full**-size model of a design or device, used for teaching, demonstration, design evaluation, promotion, and other purposes)**. After that **architectural team** implement the entire architectural structure of the application.   
  
  
Once the developers finished coding, they perform **unit testing** where they check the major functionality of the application before handing it over to the Testing team. Then coded files are transferred to the QA servers by the **Configuration team**. CM team are not only involved in the migration of the files from one server to another but also keep track of the modification & new versions of the application using **version control tools like PVCS & VSS (** is the management of changes to documents, programs, and other information stored as computer files). Then, CM team keeps the build ready for us and we start with build acceptance testing; it is basically quick test on the major functionality of the application. In other words, we check if the application does what it is supposed to do on a major basis.

Then next we moved on to the **in-depth testing** where we test each component page by page and piece by piece. Then we moved on to the **Module testing** where we do +ve and –ve testing, just to make sure that all the **java script validations** are working fine or not. One of the challenge here was the creation of **test data** as the application had interaction with other modules of the application. So, I needed to find out my own **test data**. Furthermore, because this application is very data intensive, I had to create very complex sets SQL statement to pull data from the database to make sure that data goes to the respective table. Moreover, I had to make sure that user work flows are working fine.

Then the modules are combined & tested in the **integration testing** (WIT). In WIT testing takes as its input modules that have been unit tested, groups them in larger builds and applies tests defined in an integration test plan.

We had to make sure that the data is flowing correctly between the modules. Once it is confirmed that all the modules are compatible with each other then the **system testing** is done where it is made sure that the system works or functions properly as a whole. The **system testing** is where functions from both the application are tested at the same time. Once we are satisfied that most of the components are working fine, we do the **user acceptance** or **usability testing** (UAT) to get the comments from the actual user, basically it is testing the build in the real world scenario. In UAT, first **alpha testing** was performed by the **in-house** members like the **team leads** or **directors of different departments**. Secondly in Beta testing , testing test team went to model customer site and gave demonstration on that build after that the model customer gave feedbacks.

We make sure to perform the **load testing or deployment testing** to check any variations of results between the testing done on servers and the actual results on the web. After that, **ADHOC testing** is done along with the **Smoke & Sanity** testing to get rid of the minute bugs if there’s any.   
  
During the different phases of testing, it was important for us to report the **defects or bugs** back to the developers. For each test we had reporting and **defect tracking tools**. In my last project each error was individually reported to the respective person or official with his name as the attention. The company had a standard format to report the defect where the name of the tester is there along with the module of the error, the browser it appears in, the severity of the problem and the priority the developer should take to fix it  
  
In my last few years of experience, these are relatively the general procedures or steps that I’m familiar w

KMATE

(Legacy system)

Kp.org

(Members access)

Misys

(Lab system)

**KP Healthconnect**

Procedural Database.

(Chronicles)

Relational Database (Oracle)

Pharmecy System

**KMATE**: Membership system used for registering new members, add modify and update patient’s demographic information and coverage and more.

**Kp.org**: Online service for members to access to their medical information.

**Misys Lab**: Kaiser Laboratory system used at the lab to order and enter result for various Lab.

**MCPS**: Pharmacy system used for receiving medication orders, completing orders and dispensing medications.

***There are other applications that are also connected to Healthconnect not shown in this diagram***

**Project: Kp.org Self scheduling**

Kp.org self scheduling is a project intended for Kaiser Permanente members to schedule their own appointment online with their PCP (Primary care physician). After successful implementation, Kp members will be able to Book PCP appointment online, check their upcoming appointments and cancel their appointment online. Individual from business department provides the requirement document from a national level and regional business analyst modify and update the document based on regional guidelines.

BA hands over the requirement to Development and testing team. Testing team starts writing test plan and test cases while the code is being developed. After the completion of test case writing, the test cases are sent for review and final sign off to business and development team. After the code is installed in Test environment Testing team performs System test. After the system test, WIT test cases are executed. During the test execution, testing team logs all the defects and keeps track of the defect status. After the successful execution and defect resolution UAT session takes place to introduce the new feature/Module to the end user. When the UAT session is successfully completed the code goes to Production.

**System test scenario and test data flow:**

In order to test the New Self schedule feature, Following task needs to be done in all test environment:

* New members are created in KMATE and verified that the members record also created in KPHC.
* Verified the member’s data is also recorded in Chronicles database real time.
* Execute the workflow of scheduling a PCP appointment in Kp.org test environment for the test member. Verify that the appointment is created in KP Healthconnect on that member’s record. (Check communication message in the interface monitor. Middle ware MQ)
* From KP Healthconnect schedule another appointment and verify that the appt is diplaying in Patient’s Future appointment list in KP.ORG. (Verify message in Interface monitor, no errors)
* Cancel a scheduled appointment from Kp.org and verify that members record is update as well in Kp Healthconnect. (Verify message in Interface monitor, no errors)
* Order a lab associated with the appointment and send it to the Lab system(Misys) from Kp Healthconnect. Verify that Misys system received the order. (Verify message in Interface monitor, no errors)
* Result the lab order in Misys and verify that the result status in Healthconnect for that order is updated as “Complete” and result detail is also available. (Verify message in Interface monitor, no errors)
* Verify that same result is also available in Kp.org for member to see.
* Order a medication from KP Healthconnect for the same appointment and verify that MCPS system received the order. (Verify message in Interface monitor, no errors)
* From MCPS fill the medication request and send it to Kp healthconnect. Verify that Mecation order result is updated in patient’s chart in Healthconnect. (Verify message in Interface monitor, no errors)
* Query the Relational database to see all the information entered for the test member is populated in the correct tables. Perform this test next day after the ETL process captures all data from Chronicles database.
* Check other application connected to Healthconnect that is impacted by the new feature/ module.

|  |  |
| --- | --- |
| Workflow Integration Testing (WIT) and Procedure Mapping Validation (PMV) Testing *SME Orientation & OnBoarding* | **JPEG CDF Logo** |

#### Program Name: Kaiser Permanente HealthConnect

#### Project Name: MAS EpicCare / Tapestry

#### Document Control #: KP\_HealthConnect\_SME Orientation & OnBoarding\_v1.0.doc

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Responsible Parties

|  |  |
| --- | --- |
| Prepared By | Health Connect Role |
| Alex Amato | MAS Workflow Integration Testing Lead |
| Preetha Sabapathy | MAS Procedure Mapping Validation Lead |
| Delarie Oliver | MAS Test Manager |
| Terri Rowe | National Test Lead for MAS |
| Contributors | Department/Group |
|  |  |
|  |  |

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# Introduction

## Purpose of the Document

The purpose of the SME Orientation & OnBoarding is to provide logistics, timelines, procedures and steps associated with both Workflow Integration Testing (WIT) and Procedure Mapping Validation (PMV) testing efforts. This document will provide a clear definition of how the testing efforts will take place and when specific tasks will be accomplished.

## High Level Scope

**WIT**

**[PER ALEX]**

**PMV**

Procedure Mapping Validation is required for all ancillaries where ordering and resulting may occur. The procedure mapping validation team was tasked with the following:

* Lab
* Radiology
* Pharmacy
* Immunization

# SME Roles & Responsibilities

## PMV

The Procedure Mapping Validation phase involves ordering each test, receiving each result, and ensuring that results are filing and displaying correctly in EpicCare.

Procedure Mapping Validation testing is required for all ancillaries where ordering and resulting may occur.

* **Procedure Code Mapping Resource**
  + Completion of Procedure Code Mapping work sheets
  + Load Procedure Codes into translation tables within Bridges.
  + Send the Data input spread sheets for order creation to Automation Team
  + Fix the procedure code mapping errors and re-send the spread sheet.
  + Support the testing team
* **Procedure Code Validation/Support Resources**
  + Subject Matter Experts
  + Application Coordinators (ACs) and Business Process Reengineers (BPRs)
  + Epic Interface resources
  + Interface Developers
* **Business Subject Matter Experts (SME)**
  + Testing Team Members are SME’s
  + Create test cases based upon procedure mapping worksheets
  + Create required orders in both Epic and ancillary systems to test against each mapping
  + Validate data in both Epic and ancillary systems
  + Report / create defects in Test Director for test cases that fail
  + Retest fixed code against failed test cases.
  + Provide testing resources (2 Laboratory, 2 Pharmacy, 2 Radiology & 1 Immunization)
  + Execute and review translation in both Ancillary and Epic systems
  + Help identify appropriate test data (if necessary)
* **Application Coordinators (AC) & BPRs**
  + Completed mapping worksheets for category lists, procedure maps, and translation tables
  + Provide testing support and resources if needed
  + Validate Procedure Code Mapping and resolve mapping Errors
* **Bridges resources ( Epic responsibility)**
  + Support Procedure Mapping Validation/Testing
  + Resolve translation errors in bridges
* **Interface Developers** 
  + Manipulate or create test data (providers/Patients) for procedure mapping testing
  + Ancillary test data load
  + Support Procedure Mapping Validation/Testing
  + Resolve errors related to interfaces
* **National – Automation Team** 
  + - Responsible for creating orders in EPIC using automated scripts
    - Responsible for sending the error list to Region
    - Load Epic test data (patient)
* **National – TDMG Team**
  + - Load Provider Test Data into EPIC.

## WIT

* **Business Subject Matter Experts (SME)**
  + Run test scripts in the Ancillary to trigger typical transactions in order to test integration points with EPIC.
  + Help identify appropriate test data and necessary data elements required in the Ancillary if not explicitly defined in the test case.
  + Support additional ancillary test case creation effort to create new ancillary based test cases and add additional detail to Epic based test cases.
  + Validate data in both Epic and ancillary systems
  + Report / create defects in Test Director for test cases that fail
  + Retest fixed code against failed test cases.
* **Application Coordinators (AC) & BPRs**
  + Provide testing support and resources if needed.
  + Provide clarity around test cases and the regional build when needed
* **Bridges resources ( Epic responsibility)**
  + Resolve Bridges related defects

# Logistics

## Locations

## Support Hours

## Seating

## Direct Manager Contacts

# Workflow Integration Testing (WIT) Approach

## Overview

[ALEX, check what I put in the PMV]

## Approach

### Definition of WIT

Workflow Integration Testing is End to End Integration testing across all of the components in the region’s final solution

### Testing Cycles

There are many testing cycles occurring before the deployment of the Pilot. Unit testing tests each application separately. System testing tests the interfaces between each system. While WIT testing tests the ability to successfully execute work tasks that span multiple systems and the success of these end to end tests depend on application and interface functionality. User acceptance testing and performance testing come after a successful WIT test completion.



### WIT Execution

#### Integration Engineering Testing (IET)

Performed using a selected subset of WIT Test Cases to ensure that an operationally validated and stable system is ready for WIT.

#### Product Level WIT

First phase of WIT Testing, before interfaces are connected. WIT Test Cases are executed starting and ending in Epic (i.e., interface portions of test cases are not executed)

This phase exists so that WIT Testing can overlap with System Testing (i.e., while System Testing is still verifying ancillary interfaces)

#### End to End WIT

After all interfaces are connected to Epic in the WIT Environment, WIT Test Cases can be executed in their entirety

### Types of Changes

#### Environment

Handled by the A&I group, and are usually resolved in short order.

#### Configuration updates

AC make changes to WIT environment for retesting. If the change looks good, it is is applied to Master.

#### EPIC Code updates

Code updates are reviewed individually, then applied during the testing cycle for defect resolution and verification

#### EPIC Change Requests

It is risky to implement enhancements during a Workflow Integration testing cycle, since these enhancements could have a destabilizing effect on the build. Therefore, these changes require WIT and regional manager approval, and are only applied if necessary.

#### Management of changes during WIT

Log - No one system tracks all of the above changes, so the build manager maintains a daily change log during the Workflow Integration Test Cycles.

All change authors must provide change documentation to the build manager with every update to make sure that none are missed, and all make it to the Master environment.

Updates are made in WIT, tested, and then applied to the Master environment.

After system refresh, Central Testing performs a regression test in order to verify and close fixed bugs.

### Cycles

A test cycle is defined as one complete run of all test cases for a specific deployment. It is recommended to have a minimum of 2 cycles to accommodate fixes and regression testing.

A test cycle is deemed complete when all identified test cases have been executed, and/or further testing cannot be conducted due to blocking defects.

### Refresh

* A refresh involves copying a new code base from the Master environment, then applying regional updates.
* A refresh during Workflow Integration Testing is not necessary, but should be done under the following circumstances:
* The initial test environment is not complete, and additional updates are required.
* Too many code or configuration changes have been made during the testing cycle for test environment to remain stable.
* A code drop is required for production, and cannot be applied to the current MU, or would destabilize the test environment.
* Draft schedule has been created for shakeout and testing which will be distributed and posted
* Shakeout will be carried out by ACs Thursday 4/15 and Friday 4/16
* WIT testing will begin week of 4/19, daily from 7:00 am to 7 pm, in two shifts at the Parma Testing Lab
* Schedule will be revised—including extension of testing hours or weekends—based on testing pace and number of defects encountered
* Interfaces will not be tested until the beginning of Cycle 2 on 4/26
* We will break for lunch everyday from noon to 1:00, but we must start back up promptly at 1:00 to keep on our designated pace

### AC Responsibilities:

* Perform shakeout during 4/15 – 4/16
* Provide system/process assistance to testers during WIT
* Work with Testers to determine validity of potential defects
* Work and resolve defects in AC TestDirector queue
* Man test lab during WIT

### Tester Responsibilities:

* Conduct testing using test cases in TestDirector starting 4/19
* Record testing results in TestDirector
* Inform ACs of potential defects and record true defects in TestDirector
* Retest worked defects

### Daily Status Call:

* Every day at 1:30 pm EST starting Monday 4/19 (or as needed)
* Participants: Managers, Leads, AC’s, KP Developers and EPIC
* Bridge #: 877-929-1732 PIN: 760937
* TestDirector defect summary report will be sent prior to meeting when defects need to be discussed
* Meeting invite will be sent out participants

### Contact List – Leads, Test Execution, Ancillary SMEs, ACs, EPIC,

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
|  |  |  |  |  |

## Roles and Responsibilities (Support)

AC knowledge is required during test execution

Although all possible clinical details are included in the test cases, certain GUI details are not:

Test Cases are written using the Collaborative Build as a GUI reference, before the Regional Build is ready

Certain forms’ GUI objects may have been redefined/renamed in the Regional Build

As a result, certain warning/error messages may be unexpected to a tester unfamiliar with the Regional Build

Therefore AC’s must be available during execution to interpret test case context and region-specific GUI details

## WIT Key Testing Milestones



## Entrance Criteria and Assumptions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Entrance Criteria to WIT Phase 1** |  |  |  |  |
|  |  |  |  |  |
| **Task** | **Date Planned** | **Adjusted Date** | **Date Completed** | **Owner** |
| **Build** |  |  |  |  |
| AC Phase 1 Functionality Complete (Build) | 5-Apr-04 |  | 5-Apr-04 | Joanna Lipsitz |
| AC Phase 1 Functionality Copied to Master | 30-Apr-04 |  |  | Joanna Lipsitz |
| Master Environment Readiness Complete | 30-Apr-04 |  |  | Diane Crommer |
| WIT Refresh Received and WIT Ready for Testing | 10-May-04 |  |  | Irena Fedoseeva |
| **Test Case** |  |  |  |  |
| Electronic Workflows Complete (Phase 1) | 28-Apr-04 |  |  | Trenor Williams |
| National Test Case Complete (Phase 1) | 28-Apr-04 |  |  | Rob Farr |
| Regional Test Case Signoff (Phase 1) | 28-Apr-04 |  |  | Trenor Williams |
| SMEs Review LAB/ANS test cases for Ancillary Detail | 28-Apr-04 |  |  | Jeff Vyduna |
| **Test Data** |  |  |  |  |
| Regional Test Data Identifed / Spreadsheets (Phase 1) | 28-Apr-04 |  |  | Trenor Williams |
| Regional Test Data Loaded and Setup (Phase 1) | 30-Apr |  |  |  |
| Providers, Patients, Users, Facilities | 30-Apr |  |  | Aanchal Kumar |
| Other Test Case related data | 30-Apr |  |  | Aanchal Kumar |
| Any Specific Provider or Patient setup that is not included in test case steps (eg. Provider templates) | 30-Apr |  |  | Diane Crommer |
| **Interface Readiness (System Test Complete)** |  |  |  |  |
| MiSys Lab | 30-Apr-04 |  |  | Subodh Chawla |
| ANS | 30-Apr-04 |  |  | Subodh Chawla |
| Transcription | 30-Apr-04 | 14-May-04 |  | Subodh Chawla |
| Membership Demographics | 14-May-04 |  |  | Subodh Chawla |
| Radiology | 14-May-04 |  |  | Subodh Chawla |
| PACE | 14-May-04 |  |  | Subodh Chawla |
| Encounters | 14-May-04 |  |  | Subodh Chawla |
| **WIT Environment** |  |  |  |  |
| Connectivity Testing Passes | 23-Apr |  |  | Uday |
| IET WIT Scenarios Pass | 30-Apr | 3-May |  | Alex Amato |
| Epic Available | 30-Apr |  |  | Irena Fedoseeva |
| Translation Tables Loaded | 30-Apr |  |  | Irena Fedoseeva |
| KMATE Clone Available | 30-Apr |  |  | Eujin |
| IB Available | 30-Apr |  |  | Arslan |
| Mysis LAB Clone Available | 3-May |  |  | Eujin |
| All Dependent Ancillaries Built and Available | 30-Apr |  |  | Irena Fedoseeva |
| MU6 Upgrade Decision. May 8 or May 28 | 30-Apr |  |  | Terri Rowe |
| **Resources** |  |  |  |  |
| AC Defect Support Identified | 30-Apr |  |  | Lisa Tutterow |
| WIT Testing Resources Confirmed (Syst Test Resources available, 1 EPIC executor replacement) | 30-Apr |  |  | Alex Amato |
| SME Resources Available | 10-May |  |  | Katey Lazarchik |
| EPIC On Site Support Available | 10-May |  |  | Katey Lazarchik |
| All WIT Resource Dependencies met | 10-May |  |  | Katey and Lisa |
| **WIT Phase 1** | 10-May |  |  | Alex Amato |
|  |  |  |  |  |

## Exit Criteria and Critical Success Factors

Defined 52 workflows and associated test cases have been successfully executed on non-converted data. All defects associated must be resolved before WIT can be completed.

Testing the 52 workflows against converted data has recently been added to the scope of WIT. It is still to be determined whether this testing will be criteria to the exit criteria for WIT.

Any other additional scope items that are added will impact the exit criteria.

|  |  |
| --- | --- |
| **Number** | **Workflow Name** |
| MR 01 | Abstracting Information from Paper Chart |
| MR 02 | Scanning Documents into EpicCare |
| MR 03 | Rooming a Patient |
| MR. 3a | Member Demographics |
| MR 04 | Physician Documentation |
| MR 05 | Resident Office Visits |
| MR 06 | Worker's Compensation Visits |
| MR 07 | Allergy Shot Visits |
| MR 08 | Confidential/Sensitive Encounters |
| MR 09 | Lab Only Visits - Ancillary |
| MR 10 | Radiology Walk-in - Ancillary |
| MR 11 | Dietary or Social Work During Office Visit (Allied Health) |
| MR 12 | Nurse Only Visits - Office Visits |
| MR 13 | Changing Provider on Schedule |
| MR 14 | Documenting No Shows in EpicCare |
| MR 15 | Creating Addendums to Charts |
| MR 16 | Office Visit Downtime Procedures |
| MR 17 | Order Entry General Flow |
| MR 18 | Back Office Labs and Procedures |
| MR 19 | Referral Entry |
| MR 20 | Cancel Unresulted Orders |
| MR 21 | Reprinting Orders |
| MR 22 | Telephone Encounters |
| MR 22A | Scheduled Telephone Encounters |
| MR 23 | Refill Requests |
| MR 24 | Reviewing Messages in InBasket |
| MR 25 | Lab Results Follow-up |
| MR 26 | Co-Signing Charts |
| MR 27 | Order Co-Signs |
| MR 28 | Closing Patient Charts Through InBasket |
| MR 29 | Closing Patient Encounters Through InBasket |
| MR 30 | Documenting Hospital Stays from Outside Your Organization (Hospital Encounters) |
| MR 31 | Incoming Outside Correspondence - Other Encounters |
| MR 32 | Consents |
| MR 33 | Accessing Restricted Patients |
| MR 34 | Flagging Patients |
| MR 35 | Receiving the Paper Chart in the Clinic |
| MR 36 | Requesting Paper Charts |
| MR 37 | Incoming Request for Medical Record |
| MR 38 | Beginning of Day Activities |
| MR 39 | End Of Day Activities |
| MR 40 | End User Requests Help |
| MR 41 | Assist Encounters |
| MR 42 | Group Visits |
| MR 43 | Printed Messages |
| MR 46 | New Medication Orders Placed in EpicCare |
| MR 47 | Medication Activity Management |
| MR 49 | Lab Order Entry |
| MR 52 | Episodes |

# Procedure Mapping Validation (PMV) Approach

## Overview

The Procedure Mapping Validation phase involves ordering each test, receiving each result, and ensuring that results are filing and displaying correctly in EpicCare.

Procedure Mapping Validation testing is required for all ancillaries where ordering and resulting may occur.

Procedure Mapping Approach consists of the following:

Procedure Code Translation is verified by checking the procedure codes in HL7 messages. The most highly used codes should be tested first. Pay special attention to results that contain textual comments (Most Lab and Radiology results such as cultures, biopsies, etc)

## Approach

Procedure code validation is intended to test all the procedure codes that are mapped between and ancillary system and Epic.

The main objective of procedure mapping validation is to verify that the Ancillary system procedure codes has been translated and mapped into the corresponding Epic system properly and that known issues have been verified and reconciled.

Once the orders are created , HL7 messages are generated and sent to various ancillaries. Procedure Code Translation is verified by checking the procedure codes in HL7 messages

**Validations:**

**Check the Order in Ancillary**

* The Procedure code in the Order is checked in the Ancillary Systems to validate the Procedure Code Mapping
* The Validation Spreadsheets should be manually updated with the Validation Results

**Check the Resulting Orders**

* After Validation the Orders are resulted and sent back to EPIC
* The Results are then validated in EPIC
* **Laboratory systems need to validate all mapped result components (LRR) which cannot be automated**

SME’s/AC’s will document the defects in Test Director. Each defect/exception will be evaluated and expedited based on the priority of the test condition. If results of the test match the expected results, the procedure mapping validation team will document that action as ‘Passed’ in the actual results field. If the actual results do not match the expected results, a defect should be opened immediately from the Test Lab and the actual results are imported from the issue list and documented in the actual. Once the defects are logged, the defect fixing team will fix the errors and update the test case and thus the procedure mapping validation team will re-test it.

If the epic is not resulting and if the order is still pending then the error is due to error in bridges. (Here basically validating the HL7 messages ). Generally errors resulting in bridges are caused either due to incorrect mapping or missing mapping. Check the bridges error log file for error and Record in Test Director.

Test Director training on test case and defect formats will be provided to the team before testing begins.



***Roles and Responsibilities (Support)***

* **Procedure Code Mapping Resource (Business Core Epic Team AC)**
  + Completion of Procedure Code Mapping work sheets
  + Load Procedure Codes into translation tables within Bridges.
  + Send the Data input spread sheets for order creation to Automation Team
  + Fix the procedure code mapping errors and re-send the spread sheet.
  + Support the testing team
* **Procedure Code Validation/Support Resources**
  + Subject Matter Experts
  + Application Coordinators (ACs) and Business Process Reengineers (BPRs)
  + Epic Interface resources
  + Interface Developers
* **Application Coordinators (AC) & BPRs**
  + Completed mapping worksheets for category lists, procedure maps, and translation tables
  + Provide testing support and resources if needed
  + Validate Procedure Code Mapping and resolve mapping Errors
* **Bridges resources ( Epic responsibility)**
  + Support Procedure Mapping Validation/Testing
  + Resolve translation errors in bridges
* **Interface Developers** 
  + Manipulate or create test data (providers/Patients) for procedure mapping testing
  + Ancillary test data load
  + Support Procedure Mapping Validation/Testing
  + Resolve errors related to interfaces
* **National – Automation Team** 
  + Responsible for creating orders in EPIC using automated scripts
  + Responsible for sending the error list to Region
  + Load Epic test data (patient)
* **National – TDMG Team**
  + Load Provider Test Data into EPIC.

## PMV Key Testing Milestones

|  |  |  |
| --- | --- | --- |
| Complete | Task | Owner |
|  | Completion of Code Mapping | Business Core Epic Team |
|  | Completion of Data input spreadsheet | Business Core Epic Team |
|  | Environment Availability | Business Core Epic Team |
|  | Procedure Code Translations Loaded into Bridges | Business Core Epic Team |
|  | Completion of Automation scripts | National Automation Team |
|  | Epic Test Data load | Test Data Management Group |
|  | Ancillary Test Data Load | Test Data Management Group |
|  | Create Epic orders using automated scripts | National Automation Team |
|  | Delivery of Automated report to Region | National Automation Team |
|  | Ancillary Ordering and Resulting | PMV testing SMEs |
|  | Completion of Resulting and Manual Validation | PMV testing SMEs |

## Entrance Criteria and Assumptions

The following assumptions have been made for the purpose of developing this plan. If any of these assumptions are found to be incorrect, there may be a direct impact to the validity of the plan.

Procedure Mapping will finish on or before 30 April 2004.

Environment and Test data will be available to begin the testing

The test data in Epic must be in-sync with the test data in the ancillaries.

Procedure Mapping Validation Resources will be available for validating the results.

Provider/Members data sets will be defined for procedure mapping validation and the SME’s/AC’s will use only those defined set for testing.

Test Director training sessions will be organized to record the defects.

Testing resources will be available to begin procedure mapping validations.

Resource allocation will be made such a way that proper resources will be identified for testing and fixing the errors.

System Testing is 100% done

## Exit Criteria and Critical Success Factors

* The testing can begin as soon as system testing can ensure that an interface is able to create clean orders and receive clean results
* Availability of key resources, including those outside of the project team;
* Adherence to project schedule and overall Procedure Mapping Validation schedule;
* Minimal changes to base design;
* Technical support availability (Bridges/Interface resources) throughout the procedure mapping validation period; and
* Business users support throughout the procedure validation process.
* Completion of the mapping worksheets is absolutely required for the validation effort to begin**.**
* Any changes to interfaces will affect the procedure mapping testing time line.

# Timelines & Sharing Resources

## Overview

TBD

## PMV Testing Timeline & Resources

PMV is a 12 week effort beginning 2nd week of May to test all the procedure codes in ancillary system.

(8 weeks for Lab , 8 Weeks for Pharmacy, 2-3 weeks Radiology and 1 week for Immunization)

Lab – 2 SME’s, Radiology – 2 SME’s , Pharmacy – 2 SME’s ,Immunization – 1 SME

## 

## WIT Testing Timeline & Resources



|  |  |  |  |
| --- | --- | --- | --- |
| **Ancillary** | **Duration** | **Start** | **End** |
|  |  |  |  |
| ANS | 10 days | 5/10/04 | 5/21/04 |
| MiSys Lab | 10 days | 5/17/04 | 5/28/04 |
| Encounters | 10 days | 5/17/04 | 5/28/04 |
| Transcription | 10 days | 5/17/04 | 5/28/04 |
| PACE | 10 days | 5/24/04 | 6/4/04 |
| Radiology | 10 days | 5/24/04 | 6/4/04 |
| Membership System | 10 days | 5/31/04 | 6/11/04 |
| Pharmacy | 10 days | 6/14/04 | 6/25/04 |
| Immunizations | 10 days | 6/14/04 | 6/25/04 |
| Allergy | 10 days | 6/21/04 | 7/2/04 |
| Providers | 10 days | 6/21/04 | 7/2/04 |
| **On-Call Ancillary System Support (SME)** | **50 days** | **5/10/04** | **7/16/04** |

## Test Environment

The table below indicates for each main application component and test stage , the technical environment where testing will take place.

| **Application Component** | **Test Stage** | **Environment** |
| --- | --- | --- |
| Lab | Phase1 | WIT |
| Radiology | Phase1 | WIT |
| Pharmacy | Phase2 | WIT |
| Immunization | Phase3 | WIT |

## Project Status Meetings

A weekly project status meeting will be established to communicate progress, key issues, risks and outstanding action items as they apply to procedure mapping validation and testing.

## Testing Meetings during test execution

Testing meetings will be established to discuss testing progress, key defects, defect resolution updates, identify and risk and issues. Any defects that have been identified and cannot be easily verified will be reviewed to determine if they are defects or enhancements. The Procedure Mapping validation lead will work closely with all parties involved in the testing effort. Testing Leads will present statistics on testing activities and report defects that have changed in status.

# Glossary

|  |  |
| --- | --- |
| **Term** | **Definition** |
| MAS | Mid Atlantic Region |
| ASM | Application Systems Management |
| KP HealthConnect | Kaiser Permanente HealthConnect Program |
| KP | Kaiser Permanente |
| CT&QA | Central Testing Services and Quality Assurance |
| QM&T | Quality Management and Testing |
| UT | Unit Testing |
| ST | System Testing |
| IET | Integration Engineering Testing |
| WIT | Workflow Integration Testing |
| SAT | System Acceptance Testing [change] |
| UAT | User Acceptance Test |
| PRT | Production Readiness Testing |
| TD | Test Director |
| EM | Enterprise Middleware |
| AI | Architecture and Infrastructure |