

**Clinical Ancillary Services (CAS)**  
**Development – Delivery of Pharmacy Enhancements (DDPE)**  
**VA Inpatient Medication Administration - Transdermal**

**Requirements Specification Document**



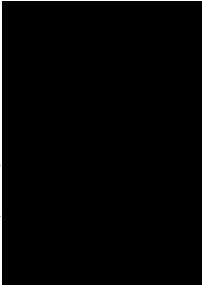
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## Revision History

Note: The revision history cycle begins once changes or enhancements are requested after the Requirements Specification Document has been baselined.

Date	Version	Description	Author
02/23/2015	1.0	Baseline document	
02/12/2015	0.1	Initial Draft	

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# 1. Introduction

## 1.1. Purpose

This Requirements Specification Document (RSD) outlines requirements for the Inpatient Medications Administration – Transdermal project. The target audience for this RSD includes Veterans Health Information Technology (VHIT), Health Provider Systems (HPS), Enterprise Product Support (EPS), Software Quality Assurance (SQA), and clinicians at Department of Veterans Administration Medical Centers (VAMC).

## 1.2. Scope

The Inpatient Medication Administration – Transdermal project aims to enhance the accuracy of administration of medications, thereby enhancing patient safety. The enhancements within Inpatient Medication Administration – Transdermal are:

Provide a solution to address the errors in transdermal medication administration processes that have led to adverse patient events. The following features related to transdermal medications are needed by the business to avert these errors in the future, by implementing the following capabilities within Inpatient Medications Administration:

- Create a mechanism to remind the user to “follow-up” on certain medications requiring additional steps in administration or assessment, e.g., alert the user to remove a transdermal medication at a specified time.
- Ensure previous statuses of multi-step medications appear in the Medication Administration History reports, e.g., the date and time a transdermal medication was applied or an intravenous fluid marked ‘infusing’ will remain visible after it has been marked ‘removed’ or ‘completed’, respectively.
- Enhance the current mechanism used to document and display the anatomic location of injectable medications to support transdermal medications as well. Implementation includes changing the terminology of ‘Injection site’ throughout the applications including Inpatient Medication Administration and VistA. Any field names used to store or refer to “location” data within VistA shall be evaluated as to whether or not the terminology needs to be changed. For example, if the field in VistA is named “IV Location,” the name of the field is changed to simply “Location” so that when data from the field are pulled into reports, the field name will adequately reflect the updated contents.
- A change to any order involving a transdermal medication forces a misleading ‘remove patch’ alert to appear. The Contractor shall change the software to differentiate between a change and a discontinued order and display an appropriate, corresponding alert.

The project’s scope of changes includes addressing the following NSRs and Patient Safety issues:

- **NSR 20120312:** Create Reminder Mechanism to Remove Transdermal Medications [REDACTED]

- **NSR 20101105:** Add Transdermal Patch Removal to BCMA Missed Med Report [redacted] [r](#) [redacted]
  - **PSPO00001978:** BCMA does not prompt user to remove a transdermal patch when the removal time differs from the next administration time [redacted] [4](#)  
[10](#)
- **NSR 20110810:** Transdermal Patch Documentation Disappears in BCMA [redacted] [0](#)
  - **PSPO00000885:** BCMA reports are misleading when patches are Removed depending on dates chosen to run the report [redacted]
- **NSR 20071011** Change Terminology for Injection Site [redacted] [r](#) [redacted]
- **NSR 20071004** Patch PSB\*3\*32 Pop Up Alert [redacted]

### 1.3. References

Hyperlinks to the references utilized for generating this RSD have been supplied where possible. Please note that some hyperlinks may only be accessible while on the VA Intranet.

BCMA Work Group SharePoint Site:

[redacted]

Inpatient Medications Administration - Transdermal Internal Development Team Site:

[redacted]

Inpatient Medication Administration – Transdermal TSPR:

[redacted]

VA Section 508 Standards Checklist/Artifacts; Policies and Procedures:

[redacted] [section508](#) [redacted] [S](#) [redacted] [p](#)

VA Quality Assurance

Standard:




[redacted]

## 2. Overall Description

### 2.1. Accessibility Specifications

All Section 508 requirements currently defined and depicted in the Health Systems Design and Development (HSDandD) Section 508 Checklists for Software Applications and Operating Systems guideline will be adhered to.

The Inpatient Medication Administration - Transdermal team will use the following checklists as a guide when building the application. We will work closely with the 508 office to ensure that the Inpatient Medication Administration - Transdermal application adheres to the current guidelines.

- [1194.21 Software applications and operating systems](#) 
- [1194.31 Functional performance criteria](#) 
- [1194.41 Information, documentation, and support](#) 

## **2.2. Business Rules Specification**

Business rules are being captured during the requirements elaboration process and will be refined while detailed technical and non-technical requirements are captured.

## **2.3. Design Constraints Specification**

The system design will comply with VA policies, directives and procedures including:

- VA-One Technical Reference Manual (TRM)
- The One VA Enterprise Architecture (EA) framework.
- VA ProPath and PMAS standards
- VA Assessment and Authorization (A&A) and related security policies
- Open Source VA Code Guidelines

If the planned system design is found to conflict with a VA policy, directive or procedure, this conflict will be discussed with the VA Project Manager who will help determine whether a waiver or exception will be requested with the applicable VA governing board.

The system will be dependent on VistA Interface Engine (VIE) for interpretation of HL7 message.

## **2.4. Disaster Recovery Specification**

Disaster recovery will follow the disaster recovery specifications for VistA at each site it is installed. The system will also fall under any disaster recovery plans used by VIE.

## **2.5. Documentation Specifications**

All required ProPath documentation to support the development, deployment, and maintenance of the Inpatient Medication Administration – Transdermal enhancements shall be produced in support of the Inpatient Medication Administration – Transdermal project. This includes but is not limited to:

- Installation Guide(s)
- Implementation Guide(s)
- User Manual(s)
- Security Guide(s)
- Requirements Traceability Matrix
- System Design Document
- Acceptance Criteria Plan
- Operations and Maintenance (O&M) Plan

All documents will be available on the Inpatient Medication Administration – Transdermal TSPR.

## 2.6. Functional Specifications

This section contains the functional requirements necessary for the development of the Inpatient Medication Administration – Transdermal project. The requirements have been organized into sub-sections in logical groupings based on workflows and functionality, with the corresponding PWS section referenced.

Due to the assignment of the CAS DDPE Inpatient Medication Administration project as being a VA Agile project, the associated Epic and User stories are referenced within this section. Each functional specification will be aligned to its respective Epic and User Story. Stakeholder prioritization of these requirements will be recorded and published using the VA-supplied IBM Rational Team Concert (RTC) application.

Apportioned requirements, as identified based on prioritization, will be recorded and marked to indicate those requirements which may be delayed to future Inpatient Medications Administration development.

### 2.6.1 Following Up on Medications Requiring Removal (PWS 5.6.3.1.a and PWS 5.6.3.1.d)

**RTC Epic 152036:** *As an end user, I want be reminded to “follow-up” on transdermal medications (for both Inpatient and Clinic Orders) so I can perform additional steps in administration or assessment in a timely manner.*

**RTC Story 152038:** As a pharmacy ADPAC, I want the ability to designate transdermal patches and other orderable items that warrant removal (e.g., nitroglycerin paste) so that I can trigger a removal action in BCMA.

Inpatient Medications Requirements:

1. Add a flag field to local Pharmacy Orderable Item FILE (#50.7), entitled “**Prompt for Removal in BCMA,**” at orderable item level, with 4 qualifying values (listed below):
  - a. 0 = No Removal (current capsule/tablet functionality). Removal Time does not display when Pharmacist is finishing the order.
  - b. 1 = Removal at Next Administration (current patch functionality). Removal Time field does not display when pharmacist is finishing the order.
  - c. 2 = Removal Prior to Next Administration. Pharmacist is prompted for Removal Time when finishing the order; however, this field is optional/not required to finish the order.
  - d. 3 = Removal Prior to Next Administration. Pharmacist is prompted for Removal Time, which is required to finish the order.

**RTC Story155658:** As a pharmacy system user, I want the ability to enter the removal time for transdermal patches and other items that are designated as requiring removal, based on order information from the provider.



#### Inpatient Medications Requirements:

1. If the **Prompt for Removal in BCMA** flag field is set to **No/Null** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order, the system shall NOT prompt the pharmacist to enter a Removal Time when finishing a medication order.
2. If the **Prompt for Removal in BCMA** flag field is set to **1** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order, the system shall NOT prompt the pharmacist to enter a Removal Time when finishing a medication order.
3. If the **Prompt for Removal in BCMA** flag field is set to **2** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order, the system shall prompt the pharmacist to enter a Removal Time when finishing the medication order.
  - a. When the medication order requiring removal is being finished, the system shall prompt the pharmacist to enter **Removal Times** for the order, based on the administration times and the comments entered by the provider in CPRS.
    - i. The **Removal Times** field shall display immediately following the Administration Times prompt.
    - ii. Entry of the **Removal Times** is not required, i.e., the medication order can be finished without entering **Removal Times**.
4. If the **Prompt for Removal in BCMA** flag field is set to **3** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order, the system shall prompt the pharmacist to enter a Removal Time when finishing the medication order.
  - a. When the medication order requiring removal is being finished, the system shall prompt the pharmacist to enter **Removal Times** for the order, based on the administration times and the comments entered by the provider in CPRS.
    - i. The **Removal Times** field shall display immediately following the Administration Times prompt.
    - ii. Entry of the **Removal Times** is required. The medication order cannot be finished without entering **Removal Times**.
5. If Removal Times have been entered for a medication order, they shall display on the Inpatient Medications Patient Profile Order Details screen.
  - a. The **Removal Times** field shall display below the Stop Time.
  - b. The **Removal Times** field shall be a “non-starred” field, i.e. updates to this field in Inpatient Medications shall not cause the order to be discontinued.
  - c. Removal Times shall be selectable for edit in the Order Details screen.
    - i. If the **Removal Times** field is selected for edit, and the **Prompt for Removal in BCMA** flag field is set to **2** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order, the system shall prompt the pharmacist to enter a Removal Time when finishing the medication order.

1. When the medication order requiring removal is being edited, the system shall prompt the pharmacist to enter **Removal Times** for the order, based on the administration times and the comments entered by the provider in CPRS.
  - a. The **Removal Times** field shall display immediately following the Administration Times prompt.
  - b. Entry of the **Removal Times** is not required, i.e., the medication order can be finished without entering **Removal Times**.
- ii. If the **Removal Times** field is selected for edit, and the **Prompt for Removal in BCMA** flag field is set to **3** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order, the system shall prompt the pharmacist to enter a Removal Time when finishing the medication order.
  1. When the medication order requiring removal is being edited, the system shall prompt the pharmacist to enter **Removal Times** for the order, based on the administration times and the comments entered by the provider in CPRS.
    - a. The **Removal Times** field shall display immediately following the Administration Times prompt.
    - b. Entry of the **Removal Times** is required. The medication order cannot be finished without entering **Removal Times**.

**RTC Story 155659:** As an end user, I want to be notified of medication administration follow-up criteria (i.e., removing a transdermal medication patch at a specified time; ointments such as nitroglycerin paste that need to be removed at a later time) so that I can safely and effectively treat patients.

BCMA Requirements:

BCMA Cover Sheet:

1. On the BCMA Cover Sheet, the system shall indicate whether or not the medication order requires removal.
  - a. If the **Prompt for Removal in BCMA** flag field is set to **0** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order, the system shall not indicate that the medication order requires removal.
  - b. If the **Prompt for Removal in BCMA** flag field is set to **1, 2 or 3** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order, the system shall indicate that the medication order requires removal.

BCMA Virtual Due List (VDL):

1. On the BCMA VDL when the Unit Dose tab is selected, the system shall indicate whether or not the medication order requires removal.
  - a. If the **Prompt for Removal in BCMA** flag field is set to **1, 2 or 3** in the Pharmacy Orderable Item FILE (#50.7), for the orderable item entered in the medication order, the system shall indicate that the medication order requires removal.
2. The system shall allow the user to mark a medication as being removed, when required.

**RTC Story 155672:** As a BCMA administrative user, I want to be able to define the period of time after an action is taken for transdermal, PRN and one-time medications for the medication to continue to display on the Virtual Due List, so end users can add pertinent comments related to the action.

BCMA Parameters:

1. The system shall allow the BCMA administrative user to determine the display duration for medications which require removal, i.e., the **Prompt for Removal in BCMA** flag field is set to **1, 2 or 3** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order.

**RTC Story 155668:** As an end user, I want transdermal medications that require removal (such as patches, ointments and pastes) to continue to display on the Virtual Due List for a period of time after I take an action so I can add pertinent comments related to the action.

BCMA Requirements:

1. The system shall display administrations on the VDL based on the duration determined by the BCMA administrative user, for medication orders containing an orderable item with the **Prompt for Removal in BCMA** flag field set to **1, 2 or 3** in the Pharmacy Orderable Item FILE (#50.7).
  - a. The system shall allow the user to perform actions on any administration displaying on the BCMA VDL, regardless of the current status of the administration.

**RTC Story 155666:** As an end user, I want to be notified prior to transdermal medication administration if the same transdermal medication (including medications from other active orders and orders for different dosages of the same medication) is currently applied to the patient so that I do not give the patient more medication than he/she requires.

BCMA Requirements:

1. If a patient has the same orderable item in more than one medication order which requires removal, i.e., the **Prompt for Removal in BCMA** flag field is set to **1, 2 or 3** in the Pharmacy Orderable Item FILE (#50.7), the system shall indicate if the medication being administered is already on the patient.

**RTC Epic 155465:** *As an end user, I want to be able to view an appropriate patch alert (for both Inpatient and Clinic Orders) when the order is changed in any way, instead of what currently happens – a remove patch alert displays when an order is changed but not discontinued.*

**RTC Story 155686:** As an end user, I want to be notified when an active transdermal patch order has been renewed, expired, changed or discontinued so that I can check the order prior to patch removal ensuring safe and effective care of patients.

BCMA Requirements:

1. If a medication order which requires removal, i.e., the **Prompt for Removal in BCMA** flag field is set to **1, 2 or 3** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order, is changed in any way, the system shall display a notification that is worded to reflect what action was taken on the order.
  - a. The system shall notify the BCMA user upon opening the patient record.
  - b. The system shall notify the BCMA user at the time he/she is taking an action on the administration.

## 2.6.2 Documenting and Displaying Anatomic Location for Medication Administrations (PWS 5.6.3.1.c)

**RTC Epic 155466:** *As an end user, I want to be able to view an appropriate anatomic location for transdermal medications in the BCMA application (for both Inpatient and Clinic Orders) instead of what is currently being used, i.e., IV location, so that when data for transdermal medications are displayed in reports, the field name will adequately reflect the updated contents.*

**RTC Story 155681:** As an end user, I want to document the administration site of transdermal medications that require removal, such as patches, as I would the injection site of a medication, so that I can appropriately and safely document administration of transdermal medications.

BCMA Requirements:

1. The system shall allow the user to select an appropriate anatomic location when administering a medication which requires removal, i.e., the **Prompt for Removal in BCMA** flag field is set to **1, 2 or 3** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order.

**RTC Story 155682:** As an end user, I want to document product administration site by selecting the anatomic location, for example on a body diagram or an expanded list, so that I can accurately depict and record the location of product administration (i.e., transdermal medications that require removal as well as injections).

BCMA Requirements:

1. The system shall prompt the user to select an appropriate anatomic location when administering:
  - a. Medications which require removal, i.e., the **Prompt for Removal in BCMA** flag field is set to **1, 2 or 3** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order
  - b. Injectable medications

**RTC Story 155684**: As an end user, I want to view the previously documented administration site for transdermal medications that require removal, such as patches, so that I can ensure appropriate rotation of administration site. Supporting Information (from BRD RTM): This will require changing the terminology of 'Injection site' throughout the applications to refer to anatomic location. This includes information about location of currently applied products, previously applied products, etc.

BCMA Requirements:

1. The system shall display the previously documented anatomic locations that were selected when administering medications.
2. The system shall display the Last Site on the VDL for any administrations which require documentation of anatomic location.

**RTC Story 155685**: As an end user, I want to be able to select from a list of anatomic locations with corresponding descriptions so that this level of detail is accurately captured for the record associated with administration of the transdermal medication.

BCMA Requirements:

1. The system shall prompt the user to select an appropriate anatomic location using contextual awareness based on medication route when administering:
  - a. Medications which require removal, i.e., the **Prompt for Removal in BCMA** flag field is set to **1, 2 or 3** in the Pharmacy Orderable Item FILE (#50.7) for the orderable item entered in the medication order.
  - b. Injectable medications.

### **2.6.3 Ensuring Statuses of Multi-step Medications Appear on Reports (PWS 5.6.3.1.b)**

**RTC Epic 155468**: *As an end user, I want to be able to view all statuses (not just the latest) for multi-step transdermal medications (for both Inpatient and Clinic Orders) in the Medication Administration History reports including the date and time a transdermal medication was applied, and when it was removed.*

**RTC Story 155673**: As an end user, I want to view transdermal medications overdue for removal on the Missed Med Report so that I can ensure that each patient receives the medication for the specific time period and no more.

BCMA Requirements:

1. The system shall document in the Missed Medications report any administrations that are past due for removal.

**RTC Story 155674**: As a provider, I want to view the current and historical status (e.g. "given" and "removed"), time of application, and initials of nurse who applied (i.e., administered) or removed the patch for Transdermal Medications on reports (i.e., medication administration history from BCMA accessible in CPRS) so that I can safely and effectively care for my patients.

- Supporting Information (not from BRD RTM): This applies to two reports in CPRS, for which data is pulled from BCMA:
  - Reports tab: Med Admin History
  - Order Details

#### CPRS Medication History Requirements:

1. The system shall provide all statuses associated with actions on medications involving multi-step administration in BCMA:
  - a. In the Medication Administration History report on the Reports tab in CPRS
  - b. In the Order Details in CPRS

**RTC Story 155679:** As an end user, I want to view the current and historical status (e.g. "given" and "removed"), time of application, and initials of nurse who applied (i.e., administered) or removed the patch for Transdermal Medications on reports (e.g. BCMA Medication Administration History [MAH] Report, BCMA Medication History and BCMA Cover Sheet) so that I can safely and effectively care for my patients.

#### BCMA Requirements:

1. The system shall provide all statuses associated with actions taken on medications involving multi-step administrations in BCMA:
  - a. In the BCMA Medication Administration History Report (MAH)
  - b. In the BCMA Medication History
  - c. In the BCMA Cover Sheet Reports

**RTC Epic 155466:** *As an end user, I want to be able to view an appropriate anatomic location for transdermal medications in the BCMA application (for both Inpatient and Clinic Orders) instead of what is currently being used, i.e., IV location, so that when data for transdermal medications are displayed in reports, the field name will adequately reflect the updated contents. For example, if the field is currently named "IV Location," then the name of the field is changed to something more generic, e.g. "Location" (or something that clearly indicates this is for the anatomic location on the patient's body where the medication is placed), so that when data for transdermal medications are displayed in reports, the field name will adequately reflect the updated contents.*

#### BCMA Requirements:

1. The system shall provide reports features (i.e. column headers, etc.) that are named in such a way that they correspond with any anatomic location for a given administration, as opposed to being specific to IV administrations, i.e. "IV Location."

## 2.6.4 Updates to BCMA Backup System (BCBU)

**RTC Epic 155468:** *As an end user, I want to be able to view all statuses (not just the latest) for multi-step transdermal medications (for both Inpatient and Clinic Orders) in the Medication Administration History reports including the date and time a transdermal medication was applied and when it was removed. Corresponding changes will be made to BCBU as well, in support of the effort to make BCBU consistent with BCMA.*

1. The BCBU system shall be modified to include enhancements related to documenting multi-step medication administrations.

**RTC Epic 155466:** *As an end user, I want to be able to view an appropriate anatomic location for transdermal medications in the BCMA application (for both Inpatient and Clinic Orders) instead of what is currently being used, i.e., IV location. For example, if the field is currently named “IV Location,” then the name of the field is changed to something more generic, e.g. “Location” (or something that clearly indicates this is for the anatomic location on the patient’s body where the medication is placed), so that when data for transdermal medications is displayed in reports, the field name will adequately reflect the updated contents. **Corresponding changes will be made to BCBU as well, in support of the effort to make BCBU consistent with BCMA.***

1. The BCBU system shall be modified to include enhancements related to documenting the appropriate anatomic location when administering a medication which requires removal.

## 2.6.5 Apportioned Requirements

**RTC Story 155662:** As an end user, I want to be notified of medication administration follow-up criteria for checking an already administered transdermal medication, so that I can verify it is still properly placed on the patient.

1. The system shall allow the BCMA user to mark a medication as being checked, when required.

**RTC Story 155672:** As a BCMA administrative user, I want to be able to define the period of time after an action is taken for transdermal, PRN and one-time medications for the medication to continue to display on the Virtual Due List, so end users can add pertinent comments related to the action.

1. The system shall allow the BCMA administrative user to determine the display duration for administrations for medication orders with schedule type “PRN”.
2. The system shall allow the BCMA administrative user to determine the display duration for administrations for medication orders with schedule type “One-Time”.
3. The system shall allow the BCMA administrative user to determine the display duration for administrations for medication orders with schedule type “On Call”.

**RTC Story 155670:** As an end user, I want PRN medications to continue to display on the Virtual Due List for a period of time after I take an action so I can add pertinent comments related to the action.

1. The system shall display administrations on the VDL based on the duration determined by the BCMA administrative user, for medication orders with schedule type “PRN”.
  - a. The system shall allow the user to perform actions on any administration displaying on the BCMA VDL, regardless of the current status of the administration.



**RTC Story 155671:** As an end user, I want one-time medications to continue to display on the Virtual Due List for a period of time after I take an action so I can add pertinent comments related to the action.

1. The system shall display administrations on the VDL based on the duration determined by the BCMA administrative user, for medication orders with schedule type “One-Time”.
  - a. The system shall allow the user to perform actions on any administration displaying on the BCMA VDL, regardless of the current status of the administration.
2. The system shall display administrations on the VDL based on the duration determined by the BCMA administrative user, for medication orders with schedule type “On Call”.
  - a. The system shall allow the user to perform actions on any administration displaying on the BCMA VDL, regardless of the current status of the administration.

**RTC Story 155675:** As a pharmacy system user, I want to view the current and historical status (e.g. "given" and "removed"), time of application, and initials of nurse who took an action on any medication, not just transdermals, (e.g. an administration history accessible from the order details screen) so that I can see the complete administration history for orders.

Inpatient Medications requirements:

1. The system shall allow the user to view the administration history by selecting an action on the Order Details screen.
2. The system shall allow the user to view in the Activity Log all actions taken for multi-step administrations.

## **2.7. Graphical User Interface (GUI) Specifications**

The software product will conform to the existing VistA conventions. Report formats and option process steps, such as “roll & scroll”, will be fielded and tested for usability by test site personnel, as well as user representatives and subject matter experts.

## **2.8. Multi-divisional Specifications**

This section, in specific relation to the Inpatient Medication Administration – Transdermal enhancements, will be identified during the requirements elaboration process.

## **2.9. Performance Specifications**

Performance Specifications shall be aligned with overall performance requirements for the One VA EA framework. Specific to the Inpatient Medication Administration – Transdermal enhancements, the following workload and performance specifications shall be elaborated during the planning period and recorded in this RSD upon availability in Table 1.



RTC ID	Requirement
TBD	Total number of users by role: <ul style="list-style-type: none"> <li>Administrator: #</li> <li>Approver: #</li> <li>Requestor: # per medical center(or potentially all VA clinical employees)</li> <li>Release Manager: #</li> </ul>
TBD	Number of concurrent users by role: <ul style="list-style-type: none"> <li>Administrator: #</li> <li>Approver: #</li> <li>Requestor: # per medical center</li> <li>Release Manager: #</li> </ul>
TBD	Response time: <ul style="list-style-type: none"> <li>Submitting / approving request: # seconds</li> <li>Running queries: # seconds or less</li> <li>Creating custom file: N/A</li> </ul>
TBD	Usage peak times: Monday through Friday, 7:00 a.m. Eastern Time – 7:00 p.m. Eastern Time
TBD	Maximum number of customization request (estimated): <ul style="list-style-type: none"> <li>Daily: #</li> <li>Weekly: #</li> </ul>
TBD	The system shall allow <MM> minutes idle time prior to time out of the application.
TBD	Number of users, worst case scenario # VMS facilities (defined as VistA instance) # LINUX facilities (defined as VistA instance) # users / facility # concurrent / facility Facilities are open from 7:00 am eastern to 7:00 pm eastern
TBD	Workload distribution on business functions: <ul style="list-style-type: none"> <li>Retrieving CMV (#/hour/site)</li> <li>Modifying IMW (#/hour/site)</li> <li>Completing RML (#/hour/site)</li> <li>Printing RML .pdf (#/hour/site)</li> <li>Generating Aggregate Patient Statistical Management Report(s) (#/hour/site)</li> <li>Generating Patient Transition Report(s) (#/hour/site)</li> </ul>

*Table 1: Workload and Performance Requirements*

## 2.10. Quality Attributes Specification

Inpatient Medication Administration – Transdermal will follow the documented VA Quality Assurance Standard located at: [REDACTED]

The Quality Assurance Standard details the overall approach to quality assurance activities for a project. This standard documents how the project defines, implements and assures quality during the software development process. The standard is also a communication vehicle for the entire project team, including the project manager, technical project manager, developers, test analysts, SQA analysts, technical writers, functional analysts, other project teams, and users.

## **2.11. Reliability Specifications**

The System shall be available 24/7, with exception made for required system (software or hardware) maintenance activities. Required maintenance activities shall be scheduled for known periods of decreased system utilization.

Additional reliability specifications associated to operation of the Inpatient Medication Administration – Transdermal will be outlined as Service Level Agreements (SLA) in a subsequent CAS contract and/or assigned VA Product Support team. The SLA is an important driver in ongoing operations processes.

Additional reliability specifications will be determined as requirements are elaborated with the advice of SDE.

## **2.12. Scope Integration**

Architecture and available services to provide and/or consume Inpatient Medication Administration – Transdermal data becomes actualized.

Each required product that will provide or receive services from the Inpatient Medication Administration – Transdermal enhancements, shall be recorded in this RSD upon with the following information:

- Integration Agreement (IA) Number, where appropriate
- Product Name
- Version Number
- Identification of interface purpose
- Definition of interface terms of message content and format

## **2.13. Security Specifications**

The Inpatient Medications application uses standard VA log-on securities, which require access and verify codes. Users can lock specified options, provided they are designated users and hold the required “key,” which limits their access to a particular option. No security modification is changed with this project.

## **2.14. System Features**

System features will be captured during the requirements elaboration process and will be outlined in future versions of the RSD.

## **2.15. Usability Specifications**

The system shall allow the user to view data from multiple sources.

The system shall allow the user to interact with displayed data to obtain additional details related to the data and source of the data.

The system shall provide data search capabilities and data sort capabilities.

The system shall provide filtering capabilities including:

- Filtering of data tables, lists, and grids
- Filtering of search results

The system shall provide data update capabilities based on system defined user role privileges.

Operationally, a formal Inpatient Medication Administration – Transdermal enhancements training program is to be developed and made available to all Inpatient Medication Administration – Transdermal users and support personnel. This training should be accessible and repeatable in the event the user is unable to immediately recall the correct course of action while utilizing the Inpatient Medication Administration – Transdermal enhancements. Due to the variances in how Inpatient Medication Administration – Transdermal business process tasks are accomplished between the VA facilities and by whom within that facility, it is recommended that several key personnel at each site are trained as super-users and subject matter experts on the Inpatient Medication Administration – Transdermal enhancements so they may address specific business process questions that arise from the staff at their respective site. The recommended formal training is not provided by the Inpatient Medications Administration – Transdermal project team.

### **3. Applicable Standards**

The standards to be adhered to for the initial VA Inpatient Medication Administration – Transdermal enhancements requirements, design, and development are still undergoing review with the key stakeholders, VA Project Management, and the Development Team to determine their alignment with the PWS. Present standards that the development team is either required to adhere to by OI&T or asked to adhere to by the stakeholders to for Inpatient Medication Administration – Transdermal enhancements development are listed below. This list may be altered with subsequent confirmation of project scope and adherence to the PWS.

- Patient Safety
- Section 508
- Meaningful Use Stage 1
- Meaningful Use Stage 2
- One VA EA
- Essential Medication Information Standards – VA Directive 1164

### **4. Interfaces**

The Inpatient Medications, Controlled Substances, and Drug Accountability applications provide one user interface: a Character-based User Interface (CHUI) that provides access to the full application menu options.

To maintain consistency within and across **VISTA**, the user interface conforms to the **VISTA** Standards and Conventions (SAC).

- Standard VA FileMan lookups are used at prompts when required.

- A **VISTA** form uses the VA FileMan's ScreenMan utility to generate all reports in a 132-character by 80-line format.

## 4.1. Communications Interfaces

Communications interfaces, if applicable, will be captured during requirements elaboration process and will be captured in future versions of the RSD.

## 4.2. Hardware Interfaces

Clinicians interface with VistA using personal computers, which are compatible with the standard software and hardware platforms outlined in Section 4.3. Software Interfaces.

## 4.3. Software Interfaces

VistA operates on the following standard server platforms used in VAMCs: Open M V. 4.0 route 43 and MS Windows 2000, NT and VMS.

Inpatient Medications requires the following versions (or higher) of VA software packages for proper implementation. The software listed is not included in this build and must be installed for the build to be completely functional.

Application	Version
Adverse Reaction Tracking	4.0
Decision Support System	3.0
Fee Basis	3.5
Integrated Funds Control, Accounting, and	5.0
Inpatient Medications	5.0
Integrated Billing	2.0
Kernel	8.0
Laboratory	5.2
Mailman	7.1
National Drug File	4.0
Nursing	4.0
Order Entry/Results Reporting	3.0
Outpatient Pharmacy	7.0
Patient Information Management Systems	5.3
Pharmacy Data Management	1.0
RPC Broker (32-bit)	1.1
Toolkit	7.3
VA FileMan	22.0

## 4.4. User Interfaces

Features of User Interfaces will be captured during requirements elaboration process and included in future versions of the RSD.

## **5. Legal, Copyright, and Other Notices**

No legal disclaimers are noted at this time. This section, in specific relation to the Inpatient Medication Administration – Transdermal enhancements, is to be fully identified as One VA Enterprise Architecture and available services to provide and/or consume Inpatient Medication Administration – Transdermal data become actualized.

## **6. Purchased Components**

Purchased components are To Be Determined (TBD). Purchased components may include hardware (e.g. Server(s)) and software licenses.

### **6.1. Defect Source (TOP 5)**

*Defect information is yet to be captured at the current requirements planning phase of the project and are TBD.*

## **7. User Class Characteristics**

User information will be captured during the requirements elaboration process and included in future versions of the RSD.

## **8. Estimation**

The estimation is based on the level of coding effort decided upon by the developers and agreed upon by the development team that can be completed within each sprint using the Agile methodology.

# Project Software Functional Size and Size-Based Effort and Duration Estimate

## Application

Item	A	B	C	D	E	Total
Counted Function Points						
Estimated Scope Growth						
Estimated Size at Release						

Size-Based Effort Estimates	Labor Hours	Probability
Low-Effort Estimate – With indicated probability, project will consume no more than:		
High-Effort Estimate – With indicated probability, project will consume no more than:		

Size-Based Duration Estimates	Work Days	Probability
Low-Duration Estimate – With indicated probability, project will consume no more than:		
High-Duration Estimate -- With indicated probability, project will consume no more than:		

**Figure 1: Cumulative Probability (“S-curve”) Chart**

*[Insert Cumulative Probability (“S-curve”) Charts here]*

## 9. Approval Signatures

Signed: \_\_\_\_\_

\_\_\_\_\_

Date

Inpatient Medications Administration – Transdermal

Project Manager / IPT Chair

Product Development

Signed: \_\_\_\_\_

\_\_\_\_\_

, PharmD

Date

Business Sponsor

Associate Chief Consultant for

Clinical Informatics and Pharmacy Re-engineering for

\_\_\_\_\_

, RPh, MHSA, Chief Consultant

Pharmacy Benefits Management

VHA Office of Patient Care Services

## A. Acronym List and Glossary

Term	Definition
ACP	Acceptance Criteria Plan
Agile Development	Is a group of software development methods based on iterative and incremental development, where requirements and solutions evolve through collaboration between self-organizing, cross-functional teams
BCMA	Bar Code Medication Administration
Clinic Orders	Orders associated with a patients 'clinic visit' for whatever the circumstance (this term is replacing Inpatient Medications for Outpatients [IMO])
CPRS	Computerized Patient Record System
DIN	A hidden action that displays the Drug Restriction/Guideline Info
FY	Fiscal Year
GUI	Graphical User Interface
HL7	Health Level 7
HIS	Health Systems Informatics
IM	Inpatient Medications
IV	Intravenous
IVP	Intravenous Push
IVPB	Intravenous PiggyBack
JAWS	Job Access with Speech
NSR	New Service Request
PSI	Patient Safety Issue
PSJ	Inpatient Medications Namespace
PSPO	Label for a reported patient safety issue in the Informatics Patient Safety (IPS) database.
PSS	Pharmacy Data Management Namespace
RDM	Requirements Development and Management
RSD	Requirements Specification Document
Scrum	Is an iterative and incremental agile software development method for managing software projects and product or application development
SDD	Software Design and Development
Sprint	A Scrum sprint is a regular, repeatable work cycle in Scrum methodology during which work is completed and made ready for review
Strength	Strength identifies the numeric amount of medication that is provided by one unit-of-use for the identified product.
TSPR	Technical Services Project Repository
VDL	Virtual Due List



<b>Term</b>	<b>Definition</b>
VHA	Veterans Health Administration
VistA	Veterans Health Information Systems and Technology Architecture

### **Template Revision History**

<b>Date</b>	<b>Version</b>	<b>Description</b>	<b>Author</b>
December 2014	1.4	Updated to conform with latest Section 508 guidelines and remediated with Common Look Office tool	Process Management
May 2014	1.3	Reordered cover sheet to clarify results of artifact searches	Process Management
May 2013	1.2	Add Appendix for acronyms and glossary	Process Management
March 2013	1.1	Formatted to current ProPath documentation standards and edited to conform with latest Alternative Text (Section 508) guidelines	Process Management
January 2013	1.0	Initial Version	PMAS Business Office