Health Integration & Modernization (HI&M)

Clozapine Overrides

Deployment, Installation, Back-Out, and Rollback Guide

Outpatient Pharmacy PSO*7.0*612

Mental Health YS*5.01*166

Inpatient Medications PSJ*5.0*403

August 2020

Department of Veterans Affairs

Office of Information and Technology (OIT)

Revision History

Date	Version	Description	Author
August 2020	1.0	Initial Version	James Harris

Artifact Rationale

The Deployment, Installation, Rollback and Back-Out Guide is delivered in accordance with Paragraph 5.3.7.4 of the Performance Work Statement (PWS) for Health Integration and Modernization (HI&M) and is due 10 days prior to release.

This document describes the Deployment, Installation, Back-out, and Rollback Plan for new products going into the VA Enterprise. The plan includes information about system support, issue tracking, escalation processes, and roles and responsibilities involved in all those activities. Its purpose is to provide clients, stakeholders, and support personnel with a smooth transition to the new product or software, and should be structured to reflect particulars of these procedures at a single or at multiple locations.

Per the Veteran-focused Integrated Process (VIP) Guide, the Deployment, Installation, Back-out, and Rollback Plan is required to be completed prior to Critical Decision Point #2 (CD #2), with the expectation that it will be updated throughout the lifecycle of the project for each build, as needed.

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1. Introduction

This document describes how to deploy and install the multi-build HI&M CLOZAPINE NCCC OVRD COVID-19, consisting of patches PSO*7.0*612 and YS*5.01*166, as well as how to back-out the product and rollback to a previous version or data set. Informational patch PSJ*5.0*403 is being released to document changes to VistA Inpatient Medications v5.0 application functionality that will result from changes in PSO*7.0*612 and YS*5.01*166, and to notify users at VA Medical Centers (VAMC's) when the changes are deployed. This document is provided as a component of the Release and Deployment Support Package for this effort.

1.1 Purpose

The purpose of this plan is to provide a single, common document that describes how, when, where, and to whom the multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 (consisting of patches PSO*7.0*612 and YS*5.01*166) will be deployed and installed, as well as how it is to be backed out and rolled back, if necessary. The plan also identifies resources, communications plan, and rollout schedule. Specific instructions for installation, back-out, and rollback are included in this document.

1.2 Dependencies

PSO*7.0*574 must be installed BEFORE PSO*7.0*612.

YS*5.0*154 must be installed BEFORE YS*5.01*166.

1.3 Constraints

This patch is intended for a fully patched VistA system.

2. Roles and Responsibilities

Table 1: Deployment, Installation, Back-out, and Rollback Roles and Responsibilities

ID	Team	Phase / Role	Tasks	Project Phase (See Schedule)
1	VA OI&T, VA OI&T Health Product Support, and PMO	Deployment	Plan and schedule deployment (including orchestration with vendors)	Planning
2	Local VAMC and CPAC processes.	Deployment	Determine and document the roles and responsibilities of those involved in the deployment.	Planning

ID	Team	Phase / Role	Tasks	Project Phase (See Schedule)
3	Field Testing (Intial Operating Capability – IOC), Health Product Support Testing & VIP Release Agent Approval	Deployment	Test for operational readiness.	Testing
4	Health product Support and Field Operations	Deployment	Execute deployment	Deployment
5	Individual Veterans Administration Medical Centers (VAMCs)	Installation	Plan and schedule installation	Deployment
6	VIP Release Agent	Installation	Ensure authority to operate and that certificate authority security documentation is in place	Deployment
7	N/A	Installation	Validate through facility POC to ensure that IT equipment has been accepted using asset inventory processes	N/A; only existing VistA system will be used.
8	VA's eBusiness team	Installations	Coordinate training	Deployment
9	VIP Release Agent, Health Product Support & the development team	Back-out	Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out)	Deployment
10	VA OI&T, VA OI&T Health Product Support, and MCCF EDIT TAS Development Team	Post Deployment	Hardware, Software and System Support	Warranty

3. Deployment

The deployment is planned as a concurrent national rollout.

This section provides the schedule and milestones for the deployment.

3.1 Timeline

The duration of deployment and installation is 3 days, as depicted in the master deployment schedule.

3.2 Site Readiness Assessment

This section discusses the locations that will receive the deployment of the multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 (which includes patches PSO*7.0*612, YS*5.01*166).

3.2.1 Deployment Topology (Targeted Architecture)

This multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 (which includes PSO*7.0*612 and YS*5.01*166) is to be nationally released to all VAMCs.

3.2.2 Site Information (Locations, Deployment Recipients)

The IOC sites are:

- New Jersey HCS, East Orange
- VA Connecticut HCS, West Haven
- Boise VA Medical Center, Boise

Upon national release all VAMCs are expected to install this patch prior to or on the compliance date.

3.2.3 Site Preparation

The following table describes preparation required by the site prior to deployment.

Table 2: Site Preparation

Site/Other	Problem/Change Needed	Features to Adapt/Modify to New Product	Actions/Steps	Owner
N/A	N/A	N/A	N/A	N/A

3.3 Resources

3.3.1 Facility Specifics

The following table lists facility-specific features required for deployment.

Table 3: Facility-Specific Features

Site	Space/Room	Features Needed	Other
N/A	N/A	N/A	N/A

3.3.2 Hardware

The following table describes hardware specifications required at each site prior to deployment.

Table 4: Hardware Specifications

Required Hardware	Model	Version	Configuration	Manufacturer	Other
N/A	N/A	N/A	N/A	N/A	N/A

3.3.3   Software

The following table describes software specifications required at each site prior to deployment.

Table 5: Software Specifications

Required Software	Make	Version	Configuration	Manufacturer	Other
Fully patched Outpatient Pharmacy package within VistA	N/A	7.0	N/A	N/A	N/A
Fully patched Mental Health package within VistA	N/A	5.01	N/A	N/A	N/A

Please see the Roles and Responsibilities table in Section 2 above for details about who is responsible for preparing the site to meet these software specifications.

3.3.4   Communications

The sites that are participating in field testing (IOC) will use the "Patch Tracking" message in Outlook to communicate with the Pharmacy eBusiness team, the developers, and product support personnel.

3.3.4.1   Deployment/Installation/Back-Out Checklist

The Release Management team will deploy the multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 (consisting of patches PSO*7.0*612 and YS*5.01*166), which is tracked nationally for all VAMCs in the National Patch Module (NPM) in Forum. Forum automatically tracks the patches as they are installed in the different VAMC production systems. One can run a report in Forum to identify when and by whom the patch was installed into the VistA production at each site. A report can also be run to identify which sites have not currently installed the patch into their VistA production system. Therefore, this information does not need to be manually tracked in the chart below.

Table 6: 3.3.4.1 Deployment/Installation/Back-Out Checklist

Activity	Day	Time	Individual who completed task
Deploy	N/A	N/A	N/A
Install	N/A	N/A	N/A
Back-Out	N/A	N/A	N/A

4. Installation

4.1   Pre-installation and System Requirements

Multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 (consisting of patches PSO*7.0*612 and YS*5.01*166) is installable on a fully patched M VistA system and operates on the top of the VistA environment provided by the VistA infrastructure packages. The latter provides

utilities which communicate with the underlying operating system and hardware, thereby providing each VistA package independence from variations in hardware and operating system.

4.2   Platform Installation and Preparation

This patch can be loaded with users in the system. Installation time will be less than 5 minutes.

4.3   Download and Extract Files

The patches PSO*7.0*612 and YS*5.01*166 are bundled together into the multi-build HI&M CLOZAPINE NCCC OVRD COVID-19. The file name is PSO_YS_CLOZ_COVID.KID and after the patches are nationally released the file can be found on the VA's SFTP download servers in the /srv/vista/patches/SOFTWARE folder.

Documentation can also be found on the VA Software Documentation Library at: https://www.va.gov/vdl/:

Table 7: Documentation

Documentation Title	Application Library
Technical Manual/Security Guide - Outpatient Pharmacy V.7.0	Pharm: Outpatient Pharmacy
User Manual - Manager - Outpatient Pharmacy V.7.0	Pharm: Outpatient Pharmacy
Release Notes - HI&M Clozapine Overrides	Pharm: Outpatient Pharmacy
Deployment Installation Back-Out and Rollback Guide - HI&M Clozapine Overrides	Pharm: Outpatient Pharmacy
MHA Security Technical Manual/Guide	Mental Health

4.4   Installation Procedure

4.4.1   Pre/Post Installation Overview

Routines should be backed up to a PackMan message before installing the build. Informational patch PSJ*5.0*403 does not contain any installable components and is not relevant to this section.

4.4.2   Pre-Installation Instructions

This patch may be installed with users on the system although it is recommended that it be installed during non-peak hours to minimize potential disruption to users. This patch should take less than 5 minutes to install. It should not be installed when the YSCL DAILY TRANSMISSION option is running. If unsure when that is check the OPTION SCHEDULING file (#19.2) using FileMan:

```
Select VA FileMan Option: Inquire to File Entries

Output from what File: OPTION SCHEDULING//  (17 entries)
Select OPTION SCHEDULING NAME: YSCL DAILY TRANSMISSION
Another one: Standard Captioned Output? Yes//  (Yes)
Include COMPUTED fields: (N/Y/R/B): NO// - No record number (IEN), no Computed Fields
```

```
NAME: YSCL DAILY TRANSMISSION
QUEUED TO RUN AT WHAT TIME: OCT 05, 2019@01:30
RESCHEDULING FREQUENCY: 1D     TASK ID: 2577736
```

If the YSCL DAILY TRANSMISSION option is running, wait for the task to finish before installing the patch.

Prior to installing the HI&M CLOZAPINE NCCC OVRD COVID-19 multi-build (consisting of patches PSO*7.0*612 and YS*5.01*166), capture the 'pre' patch checksums by running CHECK1^XTSUMBLD for each patch in the HI&M CLOZAPINE NCCC OVRD COVID-19 multi-build (patches PSO*7.0*612 and YS*5.01*166).

4.4.3   Installation Instructions

Multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 consists of patch PSO*7.0*612 and YS*5.01*166, and only these patches are installed by installing the multi-build bundle of patches.

Informational patch PSJ*5.0*403 does not contain any installable components and is not relevant to this section.

1. Place the KIDS multi-build file PSO_YS_CLOZ_COVID.KID into a local directory and use the KIDS option Load a Distribution option to load it into the transport global.

2. Choose the INSTALL/CHECK MESSAGE PackMan option.

3. From the Kernel Installation and Distribution System Menu, select the Installation Menu. From this menu, you may elect to use the following options. When prompted for the INSTALL NAME enter: PSO*7.0*612

   NOTE: Patches PSO*7.0*612 is the first patch in the multi-build bundle of patches that contains PSO*7.0*612 and YS*5.01*166. Selecting PSO*7.0*612 will automatically select both patches.

   a. Backup a Transport Global - This option will create a backup message of any routines exported with this patch.

   b. Compare Transport Global to Current System - This option will (allow you to view all changes that will be made when this patch is installed. It compares all components of this patch (routines, DDs, templates, etc.).

   c. Verify Checksums in Transport Global - This option allows you to ensure the integrity of the routines that are in the transport global.

4. From the Installation Menu, select the Install Package(s) option and choose the patch to install (PSO*7*612).

5. Accept the default when prompted 'Want KIDS to Rebuild Menu Trees Upon Completion of Install? NO//'

6. Accept the default when prompted 'Want KIDS to INHIBIT LOGONs during the install? NO//'

7. Accept the default when prompted 'Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//'

8. If prompted 'Delay Install (Minutes): (0 - 60): 0// enter 0 (zero).

Example Installation

Select Installation <TEST ACCOUNT> Option: INstall Package(s)
Select INSTALL NAME: PSO*7.0*612   7/4/20@06:19:02
  => HI&M CLOZAPINE NCCC OVRD COVID-19 ;Created on Jul 04, 2020@06:09:53

This Distribution was loaded on Jul 04, 2020@06:19:02 with header of
 HI&M CLOZAPINE NCCC OVRD COVID-19 ;Created on Jul 04, 2020@06:09:53
 It consisted of the following Install(s):
 PSO*7.0*612 YS*5.01*166
Checking Install for Package PSO*7.0*612

Install Questions for PSO*7.0*612

Checking Install for Package YS*5.01*166

Install Questions for YS*5.01*166

Incoming Files:

  603.01 CLOZAPINE PATIENT LIST (Partial Definition)
Note: You already have the 'CLOZAPINE PATIENT LIST' File.

Want KIDS to INHIBIT LOGONs during the install? NO//
Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//

Enter the Device you want to print the Install messages.
You can queue the install by enter a 'Q' at the device prompt.
Enter a '^' to abort the install.

DEVICE: HOME// HOME (CRT)

 Install Started for PSO*7.0*612 :
      Jul 04, 2020@06:19:44

Build Distribution Date: Jul 04, 2020

 Installing Routines:
      Jul 04, 2020@06:19:44

 Updating Routine file...

 Updating KIDS files...

 PSO*7.0*612 Installed.

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```
             Jul 04, 2020@06:19:44

 Install Started for YS*5.01*166 :
         Jul 04, 2020@06:19:44

Build Distribution Date: Jul 04, 2020

 Installing Routines:
         Jul 04, 2020@06:19:44

 Installing Data Dictionaries:
         Jul 04, 2020@06:19:44

 Updating Routine file...

 Updating KIDS files...

 YS*5.01*166 Installed.
         Jul 04, 2020@06:19:44

Install Completed
```

4.5   Database Creation

Multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 (consisting of patches PSO*7.0*612 and YS*5.01*166) modifies the VistA database by adding a new action cross reference to the CLOZAPINE PATIENT LIST file (#603.01). The new cross reference is triggered when a new clozapine number is added to the file and invokes new routine TRGR^PSOCLADD to automate the associated patient's clozapine registration in the PHARMACY PATIENT file (#55).

```
STORED IN ^YSCL(603.01, (138 ENTRIES)  SITE: CLN1S1.AAC.VA.GOV
UCI: VISTA,ROU          (VERSION 5.01)


DATA          NAME                 GLOBAL       DATA
ELEMENT       TITLE                LOCATION     TYPE
```

This is a list of patients authorized to receive Clozapine. This list is maintained by the National Clozapine Coordinating Center (NCCC) in Dallas.

CROSS REFERENCED BY: CLOZAPINE REGISTRATION NUMBER(B), CLOZAPINE PATIENT(C)

603.01,.01 CLOZAPINE REGISTRATION NUMBER 0;1 FREE TEXT (Required)

```
    INPUT TRANSFORM: K:$L(X)>7!($L(X)<7) X
    LAST EDITED:  MAY 19, 2020
    HELP-PROMPT:   Answer must be 7 characters in length.
    DESCRIPTION:   The Clozapine registration number is assigned
         by the manufacturer. It is maintained and
         authorized by the NCCC in Dallas. Refer all
         questions regarding this number to the NCCC.
```

CROSS-REFERENCE: 603.01^B
    1)= S ^YSCL(603.01,"B",$E(X,1,30),DA)=""
    2)= K ^YSCL(603.01,"B",$E(X,1,30),DA)

RECORD INDEXES: AC (#1589)

603.01,1 CLOZAPINE PATIENT 0;2 POINTER TO PATIENT FILE (#2)
   (Required)

LAST EDITED: MAY 19, 2020
DESCRIPTION: This is a pointer to the Patient (#2) file.
    The patient must be authorized by the NCCC in
    Dallas before treatment is started.

CROSS-REFERENCE: 603.01^C
    1)= S ^YSCL(603.01,"C",$E(X,1,30),DA)=""
    2)= K ^YSCL(603.01,"C",$E(X,1,30),DA)

RECORD INDEXES: AC (#1589)

File #603.01

Record Indexes:

AC (#1589) RECORD MUMPS IR ACTION
  Short Descr: Auto-Register Clozapine Patient
  Description: This trigger cross reference updates the CLOZAPINE
    REGISTRATION NUMBER field (#53) and the CLOZAPINE STATUS
    field (#54) in the PHARMACY PATIENT FILE (#55) when a new
    NCCC Clozapine authorization number is filed in the
    CLOZAPINE PATIENT LIST file (#603.01).
  Set Logic: D TRGR^PSOCLADD(X(2),X(1))
  Kill Logic: Q
    X(1): CLOZAPINE REGISTRATION NUMBER (603.01,.01) (Subscr 1)
    (Len 30) (forwards)
    X(2): CLOZAPINE PATIENT (603.01,1) (Subscr 2) (Len 30)
    (forwards)
   NO RE-INDEXING ALLOWED!

4.6   Installation Scripts

No installation scripts are needed for multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 installation.

4.7   Cron Scripts

No Cron scripts are needed for multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 installation.

4.8 Access Requirements and Skills Needed for the Installation

Staff performing the installation of this multi-build will need access to FORUM's NPM to view all patch descriptions. Staff will also need access and ability to download the host file from one of the VA's SFTP servers. The software is to be installed by each site's or region's designated VA OI&T IT OPERATIONS SERVICE, Enterprise Service Lines, Vista Applications Division2.

4.9 Installation Verification Procedure

4.9.1 Routine (Code) Installation Verification

Verify the routine checksums for patches PSO*7.0*612 and YS*5.01*166 match the checksum in the patch descriptions. The checksums should have been captured as part of the patch installation step "Verify Checksums in Transport Global". If checksums were not captured, they may be verified by running routine CHECK1^XTSUMBLD for each patch, PSO*7.0*612 and YS*5.01*166. Informational patch PSJ*5.0*403 does not contain any installable components and is not relevant to this section.

Example:
VISTA>D CHECK1^XTSUMBLD

New CheckSum CHECK1^XTSUMBLD:

This option determines the current checksum of selected routine(s).
The Checksum of the routine is determined as follows:

1. Any comment line with a single semi-colon is presumed to be
   followed by comments and only the line tag will be included.

2. Line 2 will be excluded from the count.

3. The total value of the routine is determined (excluding
   exceptions noted above) by multiplying the ASCII value of each
   character by its position on the line and position of the line in
   the routine being checked.

   Select one of the following:

   P   Package
   B   Build

Build from: Build

This will check the routines from a BUILD file.
Select BUILD NAME: **PSO*7.0*612**[1]
[1]NOTE: In order to verify all routine checksums, this must be run twice, once entering BUILD NAME PSO*7.0*612, and once entering BUILD NAME YS*5.01*166.

4.9.2   Data Definition Installation Verification

Use Fileman to confirm the new "AC" cross reference in the CLOZAPINE PATIENT LIST file (#603.01) is properly updated:

1. From Fileman, select the DATA DICTIONARY UTILITY menu.

2. Select the LIST FILE ATTRIBUTES option.

3. Select the CLOZAPINE PATIENT LIST file at the prompt 'START WITH What File'.

4. Accept the default (CLOZAPINE PATIENT LIST) at the prompt 'GO TO What File'.

5. Accept the default (STANDARD).

6. Enter ".01" at the prompt 'Start with field:'.

7. Enter "1" at the prompt 'Go to field:'.

8. Accept the blank default at the 'DEVICE:' prompt to print to to the screen.

9. Accept the default at the 'Right Margin:' prompt.

10. The output should include a Mumps Action RECORD INDEX with a Short Description of "Auto-Register Clozapine Patient" associated with both the CLOZAPINE REGISTRATION NUMBER field (#.01) and the CLOZAPINE PATIENT field (#1) (**see below**).

```
STANDARD DATA DICTIONARY #603.01 -- CLOZAPINE PATIENT LIST FILE  7/9/20
PAGE1
STORED IN ˆYSCL(603.01, (138 ENTRIES)  SITE: CLN1S1.AAC.VA.GOV  UCI:
VISTA,ROU                                (VERSION 5.01)


DATA      NAME           GLOBAL    DATA
ELEMENT   TITLE          LOCATION  TYPE
------------------------------------------------------------------------------
--

603.01,.01  CLOZAPINE REGISTRATION NUMBER 0;1 FREE TEXT (Required)

        INPUT TRANSFORM: K:$L(X)>7!($L(X)<7) X
        LAST EDITED:   MAY 19, 2020
        HELP-PROMPT:   Answer must be 7 characters in length.
        DESCRIPTION:   The Clozapine registration number is assigned
                by the manufacturer. It is maintained and
                authorized by the NCCC in Dallas. Refer all
                questions regarding this number to the NCCC.

        CROSS-REFERENCE: 603.01ˆB
                1)= S ˆYSCL(603.01,"B",$E(X,1,30),DA)=""
                2)= K ˆYSCL(603.01,"B",$E(X,1,30),DA)

        RECORD INDEX:   AC (#1589)  MUMPS  IR  ACTION
          Short Descr: Auto-Register Clozapine Patient
          Description: This trigger cross reference updates the
                CLOZAPINE REGISTRATION NUMBER field (#53) and
```

```
                the CLOZAPINE STATUS field (#54) in the
                PHARMACY PATIENT FILE (#55) when a new NCCC
                Clozapine authorization number is filed in the
                CLOZAPINE PATIENT LIST file (#603.01).
          Set Logic: D TRGR^PSOCLADD(X(2),X(1))
          Kill Logic: Q
            X(1): CLOZAPINE REGISTRATION NUMBER (603.01,.01)
                (Subscr 1) (Len 30) (forwards)
            X(2): CLOZAPINE PATIENT (603.01,1) (Subscr 2)
                (Len 30) (forwards)
      NO RE-INDEXING ALLOWED!


603.01,1   CLOZAPINE PATIENT    0;2 POINTER TO PATIENT FILE (#2)
                (Required)

      LAST EDITED:    MAY 19, 2020
      DESCRIPTION:    This is a pointer to the Patient (#2) file.
                The patient must be authorized by the NCCC in
                Dallas before treatment is started.

      CROSS-REFERENCE: 603.01^C
                1)= S ^YSCL(603.01,"C",$E(X,1,30),DA)=""
                2)= K ^YSCL(603.01,"C",$E(X,1,30),DA)

      RECORD INDEX:   AC (#1589)  MUMPS  IR  ACTION
        Short Descr: Auto-Register Clozapine Patient
        Description: This trigger cross reference updates the
                CLOZAPINE REGISTRATION NUMBER field (#53) and
                the CLOZAPINE STATUS field (#54) in the
                PHARMACY PATIENT FILE (#55) when a new NCCC
                Clozapine authorization number is filed in the
                CLOZAPINE PATIENT LIST file (#603.01).
          Set Logic: D TRGR^PSOCLADD(X(2),X(1))
          Kill Logic: Q
            X(1): CLOZAPINE REGISTRATION NUMBER (603.01,.01)
                (Subscr 1) (Len 30) (forwards)
            X(2): CLOZAPINE PATIENT (603.01,1) (Subscr 2)
                (Len 30) (forwards)
      NO RE-INDEXING ALLOWED!

   FILES POINTED TO               FIELDS

PATIENT (#2)           CLOZAPINE PATIENT (#1)
```

4.10   System Configuration

No system configuration changes are required for this patch.

4.11   Database Tuning

No reconfiguration of the VistA database, memory allocations or other resources is necessary.

5. Back-Out Procedure

Back-Out pertains to a return to the last known good operational state of the software and appropriate platform settings.

5.1 Back-Out Strategy

A decision to back out could be made during Site Mirror Testing, during Site Production Testing, or after National Release to the field (VAMCs). The best strategy decision is dependent on the stage during which the decision is made.

5.1.1 Mirror Testing or Site Production Testing

If a decision to back out is made during Mirror Testing or Site Production Testing, the routine backup created prior to installation may be used to restore routines to their pre-patch condition. The new Data Dictionary index may be deleted using VistA Fileman. Alternately, if there are no staff available to perform the Fileman index deletion, a new version of the patch can be used to restore the build components to their pre-patch condition.

5.1.2 After National Release but During the Designated Support Period

If a decision to back out is made after national release and within the designated support period, a new patch will be entered into the NPM in Forum and will go through all the necessary milestone reviews, etc. as a patch for a patch. This patch could be defined as an emergency patch, and it could be used to address specific issues pertaining to the original patch or it could be used to restore the build components to their original pre-patch condition.

5.1.3 After National Release and Warranty Period

After the support period, the VistA Maintenance Program will produce the new patch, either to correct the defective components or restore the build components to their original pre-patch condition.

5.2 Back-Out Considerations

Changes implemented with multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 (consisting of patches PSO*7.0*612 and YS*5.01*166) should be backed out in their entirety, they are generally interdependent and should not be backed out on an item by item basis. Backing out the two patches contained in the build (PSO*7.0*612 and YS*5.01*166) could be accomplished via a new version of multi-build HI&M if before national release or a new multi-build if after national release. Informational patch PSJ*5.0*403 does not contain any installable components and is not relevant to this section.

5.2.1 Load Testing

N/A. The patch is not expected to have a significant effect on total system performance. As a result, the performance demands on the system will be unchanged.

5.2.2   User Acceptance Testing

Requirement 1 Enhancement - Automate the Pharmacy Registration of NCCC Clozapine Authorizations. (PSO*7.0*612 and YS*5.01*166)

- Automate the clozapine registration process by automatically updating the patient's clozapine registration number and status when a new National Clozapine number is received from the NCCC.

Requirement 1 Defect 1 - Incorrect Messages Displayed in Clozapine Vista Options (PSO*7.0*612 and YS*5.01*166)

- The code associated with the 'Register a Clozapine Patient' option and the "Edit Data for a Patient in the Clozapine Program" shall display correct information about the patient's Clozapine registration status regardless of the number of clozapine numbers on file for the patient.

   o The "Register Clozapine Patient" option shall display "Patient,Name is already registered with number CL99999. Use the edit option to change registration data, or contact your supervisor" when more than one clozapine number is on file for the patient. No other change in functionality to this option.

   o The "Edit Data for a Patient in the Clozapine Program" option shall not display the incorrect message "Patient,Name has not been authorized for Clozapine by the NCCC in Dallas. Contact the NCCC in Dallas for authorization". The option will allow the selection of a patient with more than one entry in file 603.01. No other change in functionality to this option.

Requirement 1 Defect 2 - National Override Date update fails for patient with more than one clozapine authorization. (YS*5.01*166)

- The Mental Health Clozapine Server's NCCC Override process shall verify the clozapine number associated with the incoming NCCC Override matches the clozapine number registered to the patient prior to filing the NCCC Override Date. If more than on clozapine number exists for the patient, the override date will be applied to the clozapine number registered to the patient.

Requirement 2 Defect 1 - Patient with Temp Registration and an NCCC Authorization and NCCC Override Date, but day supply limited to 4. (PSO*7.0*612 and YS*5.01*166)

- When a patient with a local emergency override (Temp Registration) the receives an NCCC clozapine registration, and then an NCCC override, the local emergency override (Temp Registration) is no longer in effect and will be ignored for new orders. New pharmacy orders will be processed using the days supply associated with the patient's individual dispense frequency while the NCCC override date is in effect. The days supply for Outpatient Pharmacy orders is reflected in the Days Supply field, and for Inpatient orders the days supply is reflected in the order duration, calculated as the number of days between Start Date/Time and Stop Date/Time).

Requirement 2 Defect 2 - Patient with NCCC Authorization receives a Special Condition Fill, and later an NCCC Override Date, but day supply limited to 4. (PSO*7.0*612 and YS*5.01*166).

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- When a patient with an NCCC clozapine authorization receives a Special Condition override, followed by a NCCC override, the local Special Condition override is no longer in effect and will be ignored for new orders. New pharmacy orders will be processed using the days supply associated with their individual dispense frequency. The days supply for Outpatient Pharmacy orders is reflected in the Days Supply field, and for Inpatient orders the days supply is reflected in the order duration, calculated as the number of days between Start Date/Time and Stop Date/Time).

Requirement 2 Defect 3 - Local Special Condition Override followed by valid lab results limits orders to 4-day supply.

- When a patient with an active NCCC clozapine registration and no current clozapine lab results receives a Local Special Condition override followed by the entry of valid clozapine lab results, the Local Special Condition override is no longer in effect and will be ignored for new orders. New pharmacy orders will be processed using the days supply associated with their individual dispense frequency. The patient's dispense frequency is reflected in the order's Days Supply for Outpatient Pharmacy orders, and the Order Duration (days between Start Date/Time and Stop Date/Time) for Inpatient Medications orders.

Requirement 2 Defect 4 - Emergency (Temp Registration) Override followed by new NCCC authorization limits orders to 4-day supply. (PSO*7.0*612 and YS*5.01*166)

- When a patient with a discontinued clozapine registration and current valid lab results receives a Local Emergency Temp Override, followed by a new NCCC clozapine authorization number and registration, the Local Emergency Temp override is no longer in effect and should be ignored for new orders. New pharmacy orders should be processed using the days supply associated with the patient's dispense frequency. The patient's dispense frequency is reflected in the order's Days Supply for Outpatient Pharmacy orders, and the Order Duration (days between Start Date/Time and Stop Date/Time) for Inpatient Medications orders.

5.3   Back-Out Criteria

It may be decided to back out this patch if the project is canceled, the requested changes implemented by multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 (consisting of patches PSO*7.0*612 and YS*5.01*166) are no longer desired by VA OI&T and the Pharmacy eBusiness team, or the patch produces catastrophic problems.

5.4   Back-Out Risks

Since the changes in the multi-build HI&M CLOZAPINE NCCC OVRD COVID-19 (consisting of patches PSO*7.0*612 and YS*5.01*166) are primarily defect fixes to existing code, backing out the changes will revert the software to its defective pre-patch state.

Informational patch PSJ*5.0*403 does not contain any installable components and is not relevant to this section.

5.5 Authority for Back-Out

Any back-out decision should be a joint decision of the Business Owner (or their representative) and the Program Manager with input from the Health Product Support (HPS) Coordinator, developers (both project and Tier 3 HPS), and if appropriate, external trading partners such as the National Clozapine Coordinating Center (NCCC).

5.6 Back-Out Procedure

The back-out plan for VistA applications is complex and not a "one size fits all" solution. The general strategy for a VistA back-out is to repair the code with a follow-up patch. The development team recommends that sites log a ticket if it is a nationally released patch.

Informational patch PSJ*5.0*403 does not contain any installable components and is not relevant to this section.

Back-Out Procedure prior to National Release

If it is prior to national release, the site will be already working directly with the development team daily and should contact that team. The development team members will have been identified in the Initial Operating Capability (IOC) Memorandum of Understanding (MOU). As discussed in section 5.2, it is likely that development team can quickly address via a new software version. If the site is unsure whom to contact, they may log a ticket or contact Health Product Support - Management Systems Team.

Back-Out Procedure after National Release but during the Warranty Support Period

If a decision to back out is made after national release and within the designated support period, a new patch will be entered into the NPM in Forum and will go through all the necessary milestone reviews, etc. as a patch for a patch. This patch could be defined as an emergency patch, and it could be used to address specific issues pertaining to the original patch or it could be used to restore the build components to their original pre-patch condition.

Back-Out Procedure after National Release but during the Warranty Support Period

After the support period, the VistA Maintenance Program will produce the new patch, either to correct the defective components or restore the build components to their original pre-patch condition.

5.6.1 Back-Out Instructions

Multi-build HI&M CLOZAPINE NCCC OVRD COVID-19, consisting of patches PSO*7.0*612 and YS*5.01*166, contains the following build components:

- Routines
- Data Dictionary (New-Style Cross Reference on existing fields)

Informational patch PSJ*5.0*403 does not contain any installable components and is not relevant to this section.

While the VistA KIDS installation procedure allows the installer to back up the modified routines using the 'Backup a Transport Global' action, the back-out procedure for global, data dictionary and other VistA components is more complex and requires issuance of a follow-up patch to ensure all components are properly removed and/or restored. All software components (routines and other items) must be restored to their previous state at the same time and in conjunction with the restoration of the data.

Please contact the EPMO team for assistance since this installed patch contains components in addition to routines.

If a decision to back out is made during Mirror Testing or Site Production Testing, the routine backup created prior to installation may be used to restore routines to their pre-patch condition. The new Data Dictionary index may be deleted using VistA Fileman. Alternately, if there are no staff available to perform the Fileman index deletion, a new version of the patch can be used to restore the build components to their pre-patch condition.

To Restore routine from backup, perform the following steps:

1. From VistA mailman, select Read/Manage Messages
2. Accept default message reader.
3. Select mail basket containing backup of patch routines.
4. Select message containing backup of patch routines.
5. Enter "^" to exit at the 'Type <Enter> to continue or '^' to exit'.
6. Enter '6' for the Install/Check Message action at the 'Enter message action' prompt.
7. Enter "YES" at the 'Do you really want to do this?' prompt.
8. Optionally save the routines to be overwritten by entering "YES" at the 'Shall I preserve the routines on disk in a separate back-up message?' prompt.

To Delete the new index/cross reference imported with the patches, perform the following steps:

1. From VA Fileman, select the UTILITY FUNCTIONS option.
2. Select the CROSS-REFERENCE A FIELD OR FILE option.
3. Enter "NEW" at the 'What type of cross-reference (Traditional or New)?" prompt.
4. Enter "CLOZAPINE PATIENT LIST" at the 'Modify what File:' prompt.
5. Enter "D" for delete at the 'Choose E (Edit)/D (Delete)/C (Create):' prompt.
6. Enter "AC" at the 'Which Index do you wish to delete?' prompt.
7. Enter "YES" at the 'Are you sure you want to delete the index definition?' prompt.
8. Enter "NO" at the 'Do you want to execute the old kill logic now?' prompt.

Example: Routine Restore from Backup

```
Select OPTION NAME: XMUSER    MailMan Menu

  NML  New Messages and Responses
  RML  Read/Manage Messages
  SML  Send a Message
          Query/Search for Messages
  AML  Become a Surrogate (SHARED,MAIL or Other)
          Personal Preferences ...
          Other MailMan Functions ...
          Help (User/Group Info., etc.) ...

Select MailMan Menu <TEST ACCOUNT> Option: RML Read/Manage Messages

Select message reader: Classic//
Read mail in basket: IN//    (369 messages, 127 new)
Last message number: 369  Messages in basket: 369 (127 new)
IN Basket Message: 1// 369

Subj: Backup of PSO*7.0*612 install on Jul 09, 2020 [#20027] 07/09/20@12:19
1946 lines
From: HARRIS,JAMES In 'IN' basket.  Page 1
-------------------------------------------------------------------------------
$TXT PACKMAN BACKUP Created on Thursday, 7/9/20 at 12:19:14 by HARRIS,JAMES at
CLN1S1.AAC.VA.GOV
$ROU PSOCLADD (PACKMAN_BACKUP)
PSOCLADD ;BHAM ISC/DMA - Clozapine Registration Pharmacy Auto Update ;18 May 20
20 12:29:40
;;7.0;OUTPATIENT PHARMACY;**612**;DEC 1997;Build 22
;External reference ^YSCL(603.01 supported by DBIA 2697
;External reference ^PS(55 supported by DBIA 2228
;
Type <Enter> to continue or '^' to exit: ^

Enter message action (in IN basket): Ignore// 6

Enter a code from the list.


B       Backup              Q        Query
BR      Print to the Browser         Q xxx    Query recipient(s) xxx
C       Copy                QC       Query Current
D       Delete              QD       Query Detailed
E       Edit                QN       Query Network
F       Forward             QNC      Query Not Current
H       Headerless Print             QT       Query Terminated
HG      Help:Group Information        R        Reply
HU      Help:User Information  RI     Reply and Include responses
I       Ignore              S        Save
IN      Information only     T        Terminate
L       Later               V        Vaporize date edit
N       New                 W        Write
P       Print               X        Xtract PackMan

Enter message action (in IN basket): Ignore// Xtract PackMan
```

```
Select PackMan function: 6 INSTALL/CHECK MESSAGE

Warning: Installing this message will cause a permanent update of globals and routines.
Do you really want to do this? NO// YES

Routines are the only parts that are backed up. NO other parts are backed up, not even globals. You may use the
'Summarize Message' option of PackMan to see what parts the message contains.
Those parts that are not routines should be backed up separately if they need to be preserved.

Shall I preserve the routines on disk in a separate back-up message? YES// YES

Subject: Restore routines in PSO*7*612 and YS*5.01*166 to pre-patch state
Send mail to: HARRIS,JAMES//  HARRIS,JAMES
Select basket to send to: IN//
And Send to:

Building PackMan backup message with subject Restore routines in PSO*7*612 and YS*5.01*166 to pre-patch
state

PackMan backup message [20028] sent.
Line 2  Message #20027   Unloading Routine  PSOCLADD (PACKMAN_BACKUP)
Line 76  Message #20027   Unloading Routine  PSOCLO1 (PACKMAN_BACKUP)
Line 460 Message #20027   Unloading Routine  PSOCLUTL (PACKMAN_BACKUP)
Line 697 Message #20027   Unloading Routine  PSODIR1 (PACKMAN_BACKUP)
Line 941 Message #20027   Unloading Routine  PSOORFI2 (PACKMAN_BACKUP)
Line 1118 Message #20027   Unloading Routine  PSOORNE2 (PACKMAN_BACKUP)
Line 1316 Message #20027   Unloading Routine  PSOSIGDS (PACKMAN_BACKUP)
Line 1493 Message #20027   Unloading Routine  PSOSIGMX (PACKMAN_BACKUP)
Line 1546 Message #20027   Unloading Routine  YSCLSRV2 (PACKMAN_BACKUP)
Line 1661 Message #20027   Unloading Routine  YSCLTST2 (PACKMAN_BACKUP)
Line 1873 Message #20027   Unloading Routine  YSCLTST4 (PACKMAN_BACKUP)

Select PackMan function:
```

Example: Delete New Index/Cross Reference

```
VA FileMan 22.2

 Select OPTION: UTILITY FUNCTIONS

Select UTILITY OPTION: CROSS-REFERENCE A FIELD OR FILE

What type of cross-reference (Traditional or New)? Traditional// NEW

Modify what File: CLOZAPINE PATIENT LIST//  (12 entries)

Current Indexes on file #603.01:

 1461  'AC' index

Choose E (Edit)/D (Delete)/C (Create): DELETE

Which Index do you wish to delete? 1461//  AC

Are you sure you want to delete the index definition? NO// YES

 Index definition deleted.
```

Do you want to execute the old kill logic now? NO

5.7 Back-out Verification Procedure

Back-out may be performed manually or with a back-out patch. In either case, after back-out, testing must be conducted to verify the back-out acted as expected, as defined together with the team the site contacted in section 5.5.

If done without a back-out patch, successful back-out is confirmed by verification that the routine checksums have been restored to their pre-patch state, and the new data dictionary cross reference has been removed.

If done with a back-out patch, successful back-out is confirmed by verification that the back-out patch was successfully implemented.

Backout Verification Steps

Routines

Verify the routine checksums for patches PSO*7.0*612 and YS*5.01*166 match the checksum captured prior to installing the patches. The 'pre' checksums should have been captured as part of the patch pre-installation steps. The current (post back-out) routine checksums may be verified by running CHECK1^XTSUMBLD from the programmer prompt for both patches (see Routine Installation Verification section 4.9.1.).

Data Dictionary

Use Fileman to confirm the new "AC" cross reference in the CLOZAPINE PATIENT LIST file (#603.01) with the short description "Auto-Register Clozapine Patient" no longer exists. The deletion of the index from the current (post back-out) data dictionary may be verified using the Fileman option LIST FILE ATTRIBUTES in the DATA DICTIONARY UTILITY menu (see Data Dictionary Verification section 4.9.2).

6. Rollback Procedure

Not applicable.

6.1 Rollback Considerations

Not applicable.

6.2 Rollback Criteria

Not applicable.

6.3 Rollback Risks

Not applicable.

6.4 Authority for Rollback

Not applicable.

6.5   Rollback Procedure

Not applicable.

6.6   Rollback Verification Procedure

Not applicable.

Template Revision History

Date	Version	Description	Author
March 2016	2.2	Changed the title from Installation, Back-Out, and Rollback Guide to Deployment and Installation Guide, with the understanding that Back-Out and Rollback belong with Installation.	VIP Team
February 2016	2.1	Changed title from Installation, Back-Out, and Rollback Plan to Installation, Back-Out, and Rollback Guide as recommended by OIT Documentation Standards Committee	OIT Documentation Standards Committee
December 2015	2.0	The OIT Documentation Standards Committee merged the existing *"Installation, Back-Out, Rollback Plan"* template with the content requirements in the OIT End-user Documentation Standards for a more comprehensive Installation Plan.	OIT Documentation Standards Committee
February 2015	1.0	Initial Draft	Lifecycle and Release Management