

**Pharmacy Reengineering (PRE)**

**Inbound ePrescribing Version 3.0**

**VistA Patch # PSO\*7.0\*508**

**Deployment, Installation, Back-Out, and Rollback  
Guide**



**November 2018**

**Version 3.4**

**Department of Veterans Affairs  
Office of Information and Technology (OI&T)**

## Revision History

Date	Version	Description	Author
09/2018	3.0	New Document, Baseline Release	Technatomy
10/2018	3.1	Updated for IOC prerequisite Patches PSO*7.0*517 and PSO*7.0*540	Technatomy
10/2018	3.2	Updated Cover page to month of November	Technatomy
11/2018	3.3	Updated with Pre-installation instructions for sites upgrading from eRx v2.1/PSO*7.0*527 to eRx v3.0/PSO*7.0*508	Technatomy
11/2018	3.4	Updated Section 3.1.2 Site Information with WARNING message of two known defects 862482 and 862505.	Technatomy

## Table of Contents

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
1.1	Dependencies .....	1
1.2	Constraints.....	1
<b>2</b>	<b>Roles and Responsibilities .....</b>	<b>2</b>
<b>3</b>	<b>Deployment.....</b>	<b>2</b>
3.1	Timeline.....	2
3.1.1	Deployment Topology .....	3
3.1.2	Site Information (Locations, Deployment Recipients).....	3
3.1.3	Site Preparation .....	4
3.2	Resources .....	4
3.2.1	Facility Specifics.....	4
3.2.2	Hardware .....	4
3.2.3	Software.....	4
3.2.4	Communications.....	5
3.2.4.1	Deployment/Installation/Back-Out Checklist .....	5
<b>4</b>	<b>Installation .....</b>	<b>5</b>
4.1	Pre-installation and System Requirements.....	5
4.2	Platform Installation and Preparation .....	6
4.3	Download and Extract Files.....	6
4.4	Database Creation .....	7
4.5	Installation Scripts .....	7
4.6	Cron Scripts .....	7
4.7	Access Requirements and Skills Needed for the Installation.....	7
4.8	Pre-installation Instructions .....	7
4.9	Installation Procedure .....	7
4.10	Installation Verification Procedure .....	8
4.11	Post-Installation Procedure .....	10
4.12	Database Tuning.....	10
<b>5</b>	<b>Back-Out Procedure .....</b>	<b>11</b>
5.1	Back-Out Strategy .....	11
5.2	Back-Out Considerations .....	11

5.2.1	Load Testing .....	11
5.2.2	User Acceptance Testing .....	12
5.3	Back-Out Criteria .....	12
5.4	Back-Out Risks .....	12
5.5	Authority for Back-Out.....	12
5.6	Back-Out Procedure.....	12
6	Rollback Procedure .....	12
6.1	Rollback Considerations .....	12
6.2	Rollback Criteria .....	12
6.3	Rollback Risks .....	12
6.4	Authority for Rollback.....	12
6.5	Rollback Procedure.....	12

# 1 Introduction

This document describes how to deploy and install the Pharmacy Reengineering (PRE) Inbound ePrescribing (IEP) VistA Patch (PSO\*7.0\*508).

The purpose of this plan is to provide a single, common document that describes how, when, where, and to whom the IEP patch PSO\*7.0\*508 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.

## 1.1 Dependencies

Patch PSO\*7.0\*508 possesses a direct application dependency on the VistA Outpatient Pharmacy (OP) v.7.0 application. The following patches are required to be installed before PSO\*7.0\*508:

- PSO\*7\*372
- PSO\*7\*408
- PSO\*7\*411
- PSO\*7\*416
- PSO\*7\*442
- PSO\*7\*443
- PSO\*7\*444
- PSO\*7\*446
- PSO\*7\*454
- PSO\*7\*467
- PSO\*7\*482
- PSO\*7\*505
- PSO\*7\*517
- PSO\*7\*520
- PSO\*7\*527
- PSO\*7\*540

## 1.2 Constraints

No constraints have been identified for patch PSO\*7.0\*508.

## 2 Roles and Responsibilities

This section outlines the roles and responsibilities for managing the deployment of the patch PSO\*7.0\*508.

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

ID	Team	Phase / Role	Tasks	Project Phase (See Schedule)
1	Field Operations (FO), Enterprise Operations (EO), or Enterprise Program Management Office (EPMO) (depending upon project ownership)	Deployment	Plan and schedule deployment (including orchestration with vendors)	Deployment
2	FO, EO, or EPMO (depending upon project ownership)	Deployment	Determine and document the roles and responsibilities of those involved in the deployment.	Design/Build
3	FO, or EO	Deployment	Test for operational readiness	Design/Build
4	FO or EO	Deployment	Execute deployment	Design/Build
5	FO or EO	Installation	Plan and schedule installation	Deployment
6	Regional Project Manager (PM)/ Field Implementation Services (FIS)/ Office of Policy and Planning (OPP) PM	Installation	Ensure authority to operate and that certificate authority security documentation is in place	Design/Build
7	Regional PM/FIS/OPP PM/ Nat'l Education & Training	Installations	Coordinate training	Deployment
8	FO, EO, or Product Development (depending upon project ownership)	Back-out	Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out)	Deployment
9	FO, EO, or Product Development (depending upon project ownership)	Post Deployment	Hardware, Software and System Support	Maintenance

## 3 Deployment

The deployment is planned as a concurrent rollout. During initial operating capability (IOC) testing and after national release, patch PSO\*7.0\*508 will be distributed via the FORUM Patch Module, and may be deployed at any site without regard to deployment status at other sites.

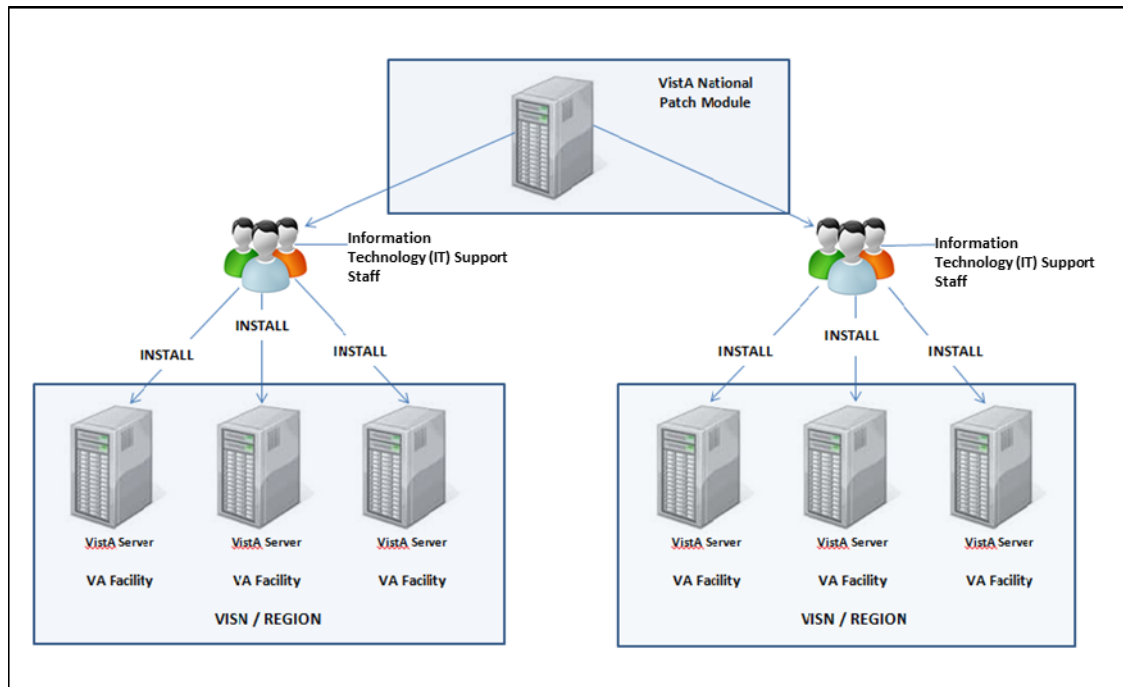
### 3.1 Timeline

The deployment and installation is scheduled to run for a period of thirty days, as depicted in the Master Deployment Schedule.

### 3.1.1 Deployment Topology

Patch PSO\*7.0\*508 will be released to all VistA sites.

**Figure 1: Deployment Topology (Targeted Architecture)**



### 3.1.2 Site Information (Locations, Deployment Recipients)

During IOC testing, patch PSO\*7.0\*508 will be deployed at the following sites:

- Brooklyn, NY VA Medical Center
- Fayetteville VAMC Veterans Health Care System of the Ozarks
- Health Administration Center (Meds by Mail)
- Indianapolis VA Medical Center

PSO\*7.0\*508 will be delivered to the Information Technology (IT) support staff responsible for the VistA installation at those sites. The software will be installed in the IOC test and production environments.

After National Release, Patch PSO\*7.0\*508 will be deployed at all sites running the Outpatient Pharmacy v.7.0 application.

**WARNING:** There are two (2) known defects against PSO\*7.0\*508 to be assigned to the eRx v3.0 Sustainment team for resolution:

- 1) PHARM(CM) Defect 862482 Locking issue both in PCV and RX view with multiple VistA sessions open

Defect Test scenario:

If an erx pharmacist opens two VistA sessions on the same patient (in both message-centric and patient-centric view) and then closes one session, the lock placed by that pharmacist is removed. A second erx pharmacist can then edit the same patient eRx entries, simultaneously, as first pharmacist.

- 2) Defect 862505 PHARM(CM) Defect 862505 Locking issue between PCV / RX view and ERX REFERENCE NUMBER, while searching(SR) the same prescription using ERX REFERENCE NUMBER.

Defect Test scenario:

If a pharmacist selects a patient in both message-centric and patient-centric views, and goes into a patient record for validation and acceptance, second pharmacist can get into the same record by searching for erx reference number, thus, bypassing the lock on that patient.

### **3.1.3 Site Preparation**

To prepare for the site, the following patches: PSO\*7\*372, PSO\*7\*408, PSO\*7\*411, PSO\*7\*416, PSO\*7\*442, PSO\*7\*443, PSO\*7.0\*444, PSO\*7.0\*446, PSO\*7\*454, PSO\*7.0\*467, PSO\*7\*482, PSO\*7\*505, PSO\*7\*517, PSO\*7\*520, PSO\*7\*527 and PSO\*7\*540 are required to be installed before PSO\*7.0\*508.

## **3.2 Resources**

Deployment of Patch PSO\*7.0\*508 requires an up to date VistA environment running the Outpatient Pharmacy v.7.0 application, as well as designated IT support available to perform the patch installation.

### **3.2.1 Facility Specifics**

There are no facility-specific deployment or installation features of patch PSO\*7\*508.

### **3.2.2 Hardware**

Patch PSO\*7.0\*508 is being released to enhance VistA's Pharmacy Outpatient Pharmacy package. The patch allows the VA to receive prescriptions from external providers and allows the pharmacist to validate the prescription for final processing and dispensing in existing VistA functionality. It will be deployed to all VA pharmacy VistA sites nationwide.

It does not require additional hardware capabilities other than what is currently used by a VistA installation at the sites.

### **3.2.3 Software**

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



**Table 2: Software Specifications**

Required Software	Make	Version	Configuration	Manufacturer	Other
Outpatient Pharmacy		7.0	Standard	VHA	

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

## 3.2.4 Communications

No notifications are required for deployment of patch PSO\*7.0\*508 other than the patch description released through Forum.

### 3.2.4.1 Deployment/Installation/Back-Out Checklist

Sites should fill out the table below indicating who performed an activity and when it was performed prior to installation.

**Table 3: Deployment/Installation/Back-Out Checklist**

Activity	Day	Time	Individual who completed task
Deploy -The Deploy activity is performed when the patch is sent to site(s) by the National Patch Module or Release Agent.			
Install - The Install activity is performed when the patch is installed at the site(s).			
Back-Out - The optional Back-Out activity is performed in the event the patch must be uninstalled, or removed, from the site(s).			

# 4 Installation

## 4.1 Pre-installation and System Requirements

Access to the National VA Network and to the local network of each site to receive patch PSO\*7.0\*508 is required to perform the installation, as well as the authority to install patches.

Knowledge of, and experience with, the Kernel Installation and Distribution System (KIDS) software is required. For more information, see Section V, Kernel Installation and Distribution System, in the [Kernel 8.0 & Kernel Toolkit 7.3 Systems Management Guide](#).

**Pre/Post Installation Overview:** The user installing this patch must hold the XUMGR security key. This key is needed to ensure the creation of the application proxy user (PSOAPPLICATIONPROXY,PSO) completes properly.

**Pre-Installation Instructions:** This patch may be installed with users on the system, although it is recommended that it be installed outside normal business hours to minimize potential

disruption to users. Follow the below instructions to install PSO\*7.0\*508. No options need to be placed out of service. Installation time is expected to be less than five minutes.

## 4.2 Platform Installation and Preparation

Patch PSO\*7.0\*508 does not require any platform installation or preparation. For Sites currently configured and running PSO\*7.0\*527 see section 4.8 Pre-Installation Instructions.

## 4.3 Download and Extract Files

Patch PSO\*7.0\*508 is being released as a FORUM Patch message, which will be sent to the G.PATCHES mail group.

Documentation describing the new functionality introduced by this patch is available. The preferred method is to retrieve files from download.vista.med.va.gov. This transmits the files from the first available server. Sites may also elect to retrieve files directly from a specific server.

Sites may retrieve the software and/or documentation directly using Secure File Transfer Protocol (SFTP) from the ANONYMOUS.SOFTWARE directory at the following OI Field Offices:

Hines: fo-hines.med.va.gov  
Salt Lake City: fo-slc.med.va.gov

The documentation will be in the form of Adobe Acrobat files. Documentation can also be found on the VA Software Documentation Library at: <http://www4.va.gov/vdl/>

Title: Installation Guide - Inbound ePrescribing (PSO\*7.0\*508)  
File Name: PSO\_7\_0\_P508\_ig.pdf  
FTP Mode: Binary

Title: User Manual – Inbound ePrescribing (PSO\*7.0\*508)  
File Name: PSO\_7\_0\_P508\_um.pdf  
FTP Mode: Binary

Title: Release Notes - Inbound ePrescribing (PSO\*7.0\*508)  
File Name: PSO\_7\_0\_P508\_rn.pdf  
FTP Mode: Binary

Title: Technical Manual/Security Guide - Outpatient Pharmacy V.7.0  
File Name: PSO\_7\_0\_tm.pdf  
FTP Mode: Binary

Title: Implementation Guide - Inbound ePrescribing (PSO\*7.0\*508)  
File Name: PSO\_7\_0\_P508\_img.pdf  
FTP Mode: Binary

## 4.4 Database Creation

No new database is required for the patch PSO\*7.0\*508.

## 4.5 Installation Scripts

No installation scripts are required for installation of patch PSO\*7.0\*508.

## 4.6 Cron Scripts

No Cron scripts are required for installation of patch PSO\*7.0\*508.

## 4.7 Access Requirements and Skills Needed for the Installation

Access to the National VA Network and to the local network of each site to receive patch PSO\*7.0\*508 is required to perform the installation, as well as the authority to install patches.

Knowledge of, and experience with, the Kernel Installation and Distribution System (KIDS) software is required. For more information, see Section V, Kernel Installation and Distribution System, in the [Kernel 8.0 & Kernel Toolkit 7.3 Systems Management Guide](#).

## 4.8 Pre-installation Instructions

**IMPORTANT:** Please contact the PRE Inbound eRx Sustainment Team prior to installing the PSO\*7.0\*508 patch if a pharmacy at your site is currently receiving Inbound eRx prescriptions using patch PSO\*7.0\*527. Email the Inbound eRx Sustainment Team at [inbounderx@va.gov](mailto:inbounderx@va.gov) for support in applying new configuration settings.

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.

## 4.9 Installation Procedure

This patch may be installed with users on the system, although it is recommended that it be installed outside normal business hours to minimize potential disruption to users. Follow the below instructions to install PSO\*7.0\*508. No options need to be placed out of service. Installation time is expected to be less than five minutes.

1. Choose the PackMan message containing this patch.
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 the patch # (e.g., PSO\*7.0\*508):
  - a. Backup a Transport Global - This option will create a backup message of any routines exported with this patch. It will not backup any other changes such as DDs or templates.

- 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 (e.g., routines, data dictionaries, templates, etc.).
- c. Verify Checksums in Transport Global - This option will allow 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.
5. If prompted 'Want KIDS to Rebuild Menu Trees Upon Completion of Install? NO//', answer 'NO//'.
6. When prompted 'Want KIDS to INHIBIT LOGONs during the install? NO//', answer 'NO//'.
7. When prompted 'Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//', answer 'NO//'.
8. If prompted 'Delay Install (Minutes): (0 - 60): 0//' respond 0.

## 4.10 Installation Verification Procedure

Local sites can verify the installed components by verifying routine checksums.

The checksums below are new checksums, and can be checked with CHECK1^XTSUMBLD.

Routine Name: PSO508PO

Before: n/a After: B19257631 \*\*508\*\*

Routine Name: PSOCAN

Before: B53171969 After: B55445842 \*\*11,21,24,27,32,37,88,117,131,185,253,251,375,379,390,413,372,416,508\*\*

Routine Name: PSOCAN1

Before: B60678355 After: B63054494 \*\*8,20,24,27,32,131,163,185,238,372,442,508\*\*

Routine Name: PSOCAN3

Before: B71988154 After: B73058805 \*\*15,24,27,32,36,94,88,117,131,146,139,132,223,235,148,249,225,324,251,375,379,372,540,508\*\*

Routine Name: PSOCAN4

Before: B49357876 After: B51143319 \*\*20,24,27,63,88,117,131,259,268,225,358,385,391,508\*\*

Routine Name: PSOCMOPA

Before: B16159826 After: B16718315 \*\*61,76,443,508\*\*

Routine Name: PSOERX

Before: B70347933 After: B122296708 \*\*467,527,508\*\*

Routine Name: PSOERX1

Before: B78477879 After: B96375321 \*\*467,520,527,508\*\*

Routine Name: PSOERX1A

Before: B129260267 After: B140048297 \*\*467,527,508\*\*

Routine Name: PSOERX1B

Before: B162952220 After: B200556396 \*\*467,506,520,527,508\*\*

Routine Name: PSOERX1C

Before: B40194088	After: B61030450	**467,520,527,508**
Routine Name: PSOERXA1		
Before: B233267035	After: B188146400	**467,520,508**
Routine Name: PSOERXA2		
Before: B104569280	After: B111979280	**467,520,508**
Routine Name: PSOERXA3		
Before: B37438894	After: B38164072	**467,508**
Routine Name: PSOERXA5		
Before: n/a	After: B65388361	**508**
Routine Name: PSOERXC1		
Before: n/a	After: B92546733	**508**
Routine Name: PSOERXD2		
Before: B211196189	After: B182647633	**467,506,520,508**
Routine Name: PSOERXEN		
Before: n/a	After: B15625365	**508**
Routine Name: PSOERXH1		
Before: B17222601	After: B17222601	**467,527,508**
Routine Name: PSOERXO1		
Before: B64732722	After: B115835250	**467,520,508**
Routine Name: PSOERXU1		
Before: B88661299	After: B144420314	**467,520,508**
Routine Name: PSOERXU2		
Before: n/a	After: B50733365	**508**
Routine Name: PSOERXU3		
Before: n/a	After: B170900975	**508**
Routine Name: PSOERXU4		
Before: B35485114	After: B33741259	**520,508**
Routine Name: PSOERXU5		
Before: n/a	After: B64488961	**508**
Routine Name: PSOERXU6		
Before: n/a	After: B111664391	**508**
Routine Name: PSOERXX1		
Before: B47206629	After: B155540262	**467,520,527,508**
Routine Name: PSOERXX2		
Before: B181162473	After: B185958519	**467,508**
Routine Name: PSOERXX3		
Before: B81556769	After: B84060041	**467,508**
Routine Name: PSOERXX4		
Before: B86144240	After: B109158139	**467,508**
Routine Name: PSOERXX5		
Before: B181218192	After: B161348685	**467,508**
Routine Name: PSOERXZ1		
Before: n/a	After: B224204114	**508**
Routine Name: PSOORAL1		
Before: B120026363	After: B141679409	**71,156,148,247,240,287,354,367,408, 482,508**

Routine Name: PSOORFIN

Before: B72047260 After: B72090334 \*\*7,15,27,32,44,46,84,106,111,117,131,146,  
139,195,225,315,266,338,391,372,416,446,  
505,508\*\*

Routine Name: PSOORNE6

Before: B50434819 After: B56294478 \*\*46,103,117,156,210,488,505,508\*\*

Routine Name: PSOORNEW

Before: B112662411 After: B119220767 \*\*11,23,27,32,55,46,71,90,94,106,131,133,  
143,237,222,258,206,225,251,386,390,391,  
372,416,431,313,408,436,411,444,486,446,  
505,517,508\*\*

Routine Name: PSOORUT1

Before: B124954661 After: B131536196 \*\*1,14,30,46,132,148,233,274,225,305,289,251,  
387,385,313,427,444,454,508\*\*

Routine Name: PSORENW

Before: B48759882 After: B49878168 \*\*11,27,30,46,71,96,100,130,148,206,388,390,  
417,313,411,508\*\*

Routine Name: PSORENW4

Before: B73245534 After: B68530272 \*\*11,23,27,32,37,64,46,75,71,100,130,117,152,  
148,264,225,301,390,313,411,444,508\*\*

Routine list of preceding patches: 442, 443, 454, 482, 517, 527, 540

## 4.11 Post-Installation Procedure

There are additional steps to be completed prior to Implementation and Go-Live for Inbound eRx. Please refer to Inbound ePrescribing (IEP) VistA PSO\*7.0\*508 / IEP Web-based GUI Version 3.0 Implementation Guide found in the Documentation Retrieval Instructions or on the Outpatient Pharmacy VA Software Document Library (VDL) when site is ready to complete final setup. The VDL URL is <https://www.va.gov/vdl/application.asp?appid=90>.

## 4.12 Database Tuning

No database tuning is required before or after deployment of PSO\*7.0\*508.



**Note: Installation of PSO\*7.0\*508 is completed. The following procedure is to be followed only if PSO\*7.0\*508 needs to be backed out.**

## **5 Back-Out Procedure**

**NOTE:** Due to the complexity of this patch (because of the data dictionary changes), it is not recommended for back-out. However, in the event that a site decides to back-out this patch, the site should contact the NSD at 855-NSD-HELP (673-4357) and reference “Inbound eRx” to submit a CA SDM ticket; the development team will assist with the process.

The Back-out Procedure consists of restoring the routines and removing the Data Dictionaries (DD) introduced by the Patch PSO\*7.0\*508.

The rollback/backout procedure for these patches should only occur when there is concurrence from the Enterprise Product Support and Inbound ePrescribing development teams, because of the complexity and risk involved in a rollback/backout. Normal installation back-ups using KIDS will back up only Mumps routines. For all non-routine components of these builds, Enterprise Product Support will have a build available if needed. Make sure the ‘Backup a Transport Global’ step in section 4.8 of this document is followed, so you do have a backup of all the routines if needed.

The back-out is to be performed by persons with programmer-level access.

### **5.1 Back-Out Strategy**

The Back-out Strategy is to manually delete the new Data Definitions (DDs) introduced with this patch.

The Back-out and Rollback plan for VistA applications is complex and not able to be a “one size fits all.” The general strategy for VistA back-out and rollback is to repair the code with a follow-on patch. However, the backup of the transport global when created as part of the install will allow the routines to be converted to the prior patch state. For IEP, this is sufficient to restore the code to prior functionality.

The development team recommends that sites log a help desk ticket if it is a nationally released patch; otherwise, the site should contact the product development team directly for specific solutions to their unique problems.

### **5.2 Back-Out Considerations**

The back-out should only be done in the event that the local facility management determines that the Patch PSO\*7.0\*508 is not appropriate for that facility, and should only be done as a last resort.

#### **5.2.1 Load Testing**

No load testing is required for patch PSO\*7.0\*508.

## **5.2.2 User Acceptance Testing**

User Acceptance Testing (UAT) for IEP occurred from August 6 – August 10, 2018.

## **5.3 Back-Out Criteria**

Local Facility Management would need to determine patch PSO\*7.0\*508 is not appropriate for their facility.

## **5.4 Back-Out Risks**

By backing out PSO\*7.0\*508, the local facility will not be able to use the IEP functionality to validate and process Inbound ePrescriptions (eRx) from external providers.

## **5.5 Authority for Back-Out**

Local Facility Management has the authority to back-out patch PSO\*7.0\*508.

## **5.6 Back-Out Procedure**

Due to the complexity of this patch, it is not recommended for back-out. However, in the event that a site decides to back-out this patch, the site should contact the National Service Desk (NSD) at 855-NSD-HELP (673-4357) and reference “Inbound eRx” to submit a CA SDM ticket; the development team will assist with the process.

# **6 Rollback Procedure**

The rollback procedures for this patch are the same as the back-out procedures.

## **6.1 Rollback Considerations**

Refer to the [Back-Out Procedure](#) section of this document.

## **6.2 Rollback Criteria**

Refer to the [Back-Out Procedure](#) section of this document.

## **6.3 Rollback Risks**

The risks of performing a rollback include the downtime of not validating and processing eRx's received from external providers.

## **6.4 Authority for Rollback**

The chief of Pharmacy Benefits Management (PBM) must provide the authority to roll back patch PSO\*7.0\*508.

## **6.5 Rollback Procedure**

Refer to the [Back-Out Procedure](#) section of this document.