Outpatient Pharmacy

Inbound ePrescribing Version 5.0

New eRx Holding Queue Option

Meds By Mail Class 3 to Class 1 Conversion Project

VistA Patch # PSO*7.0*700

Installation Guide

December 2023

Version 1.0

Department of Veterans Affairs

Office of Information and Technology (OI&T)

Revision History

Date	Version	Description	Author
12/2023	1.0	Initial Document	REDACTED

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1 Introduction

This document describes how to deploy and install the Pharmacy Inbound ePrescribing (IEP) VistA Patch (PSO*7.0*700).

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*700 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*700 possesses a direct application dependency on the VistA Outpatient Pharmacy (OP) v.7.0 application. Patch PSO*7*243, PSO*7*545, PSO*7*557, PSO*7*669, PSO*7*686, PSO*7*689, PSO*7*706, PSO*7*715, and PSO*7*718 are required to be installed before PSO*7.0*700.

1.2 Constraints

None.

2 Roles and Responsibilities

This section outlines the roles and responsibilities for managing the deployment of the patch PSO*7.0*700.

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 Inbound Electronic Prescribing (eRx) enhancements delivered in Patch PSO*7*.0*700 include updates to the current eRx functionality to convert all of the MbM Class 3 modifications into Class 1. Patch PSO*7.0*700 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

This patch will take approximately between 30 and 120 minutes to complete installation. The duration will depend on how many eRx records currently exists on your database. For Meds-By-Mail (MbM), with a little more than 7,000,000 eRx records, the installation took about 120 minutes.

3.1.1 Deployment Topology

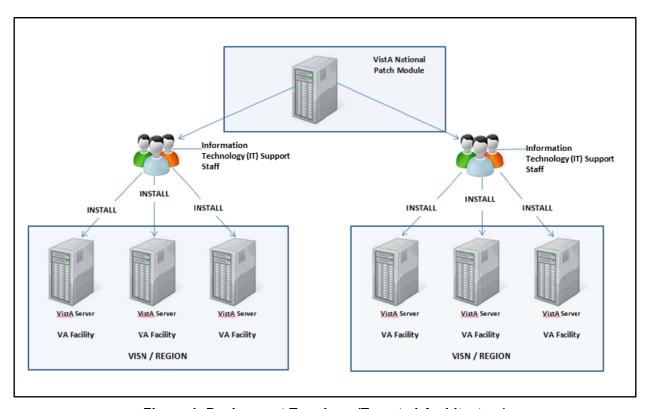Patch PSO*7.0*700 will be released to all VistA sites.

Figure 1: Deployment Topology (Targeted Architecture)

3.1.2 Site Information (Locations, Deployment Recipients)

During IOC testing, patch PSO*7.0*700 will be deployed at the following sites:

- Health Administration Center (Meds by Mail)
- Central Texas, Temple VA Medical Center Pharmacy

PSO*7.0*700 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*700 will be deployed at all sites running the Outpatient Pharmacy v.7.0 application.

3.1.3 Site Preparation

To prepare for the site, patch: Patch PSO*7*243, PSO*7*545, PSO*7*557, PSO*7*669, PSO*7*686, PSO*7*689, PSO*7*706, PSO*7*715, and PSO*7*718 are required to be installed before PSO*7.0*700.

3.2 Resources

Deployment of Patch PSO*7.0*700 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*700.

3.2.2 Hardware

Patch PSO*7.0*700 is being released to enhance VistA's Pharmacy Outpatient Pharmacy package. This patch includes updates to the current Inbound Electronic Prescribing (eRx) functionality to convert all of the MbM Class 3 modifications into Class 1. 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*700 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*700 is required to perform the installation, as well as the authority to install patches.

4.1.1 Pre/Post Installation Overview

Pre-Install:
A pre-install process will check whether any of the new protocols in this patch already exists at the site where the patch is being installed. If any protocol is found it will be deleted. None of the new protocols should exist at your site prior to installation of this patch for the first time, it will be more important in the unlike event of the need to install the patch twice.

Post-Install:
A few steps will be performed soon after the patch is installed:
- The new file ERX HOLDING QUEUE PREFERENCES (#52.35) created to store user preferences for eRx Holding Queue lists will be initialized in order to later store individual user's preferences
- Three new Holding Codes are being created by this patch:
  - HAL - NO PATIENT ALLERGY ASSESSMENT

- o HEL - PATIENT ELIGIBILITY ISSUE
- o HUR – UN-REMOVED
- The following new cross-references will be build by this patch post-install process:
  - o APATVPAT – This cross-reference is used to suggest a VistA Patient
  - o APRVVPRV – This cross-reference is used to suggest a VistA Provider
  - o AVPAT – This cross reference is used to determine the last received date of an eRx for a VistA Patient
  - o AVPRV – This cross reference is used to determine the last received date of an eRx for a VistA Provider
  - o ADRGVRX – This cross-reference is used to suggest a Drug along with all the other fields (Dosage, SIG, Days Supply, Qty, etc..)
  - o AMSGDTSTS – This cross reference is used to considerably increase performance for loading eRx Holding Queue lists (Patient Centric and Rx Medication)

4.2 Platform Installation and Preparation

Patch PSO*7.0*700 does not require any platform installation or preparation.

4.3 Download and Extract Files

Patch PSO*7*700 is being released as a FORUM Patch message, which will be sent to the G.PATCHES mail group.

The documentation, described in the table below, will be in the form of Adobe Acrobat files. Documentation can be found on the VA Software Documentation Library at: **http://www.va.gov/vdl/.** Documentation can also be found at **https://download.vista.med.va.gov/index.html/SOFTWARE**.

Table 4: Installation Documentation

Title	File Name	FTP Mode
Installation Guide - Inbound ePrescribing (PSO*7.0*700)	PSO_7_0_P700_DIBRG.docx PSO_7_0_P700_DIBRG.pdf	Binary
User Manual – Inbound ePrescribing – Unit 7 Part 1 (PSO*7.0*700)	PSO_7_0_P700_UM_71.docx PSO_7_0_P700_UM_71.pdf	Binary
User Manual – Inbound ePrescribing – Unit 7 Part 2 (PSO*7.0*700)	PSO_7_0_P700_UM_72.docx PSO_7_0_P700_UM_72.pdf	
Outpatient Pharmacy Version 7 Manager's User Manual (PSO*7.0*700)	PSO_7_0_P700_MAN_UM.docx PSO_7_0_P700_MAN_UM.pdf	
Outpatient Pharmacy Version 7 Pharmacist's User Manual (PSO*7.0*700)	PSO_7_0_P700_PHARM_UM.docx PSO_7_0_P700_ PHARM_UM.pdf	
Outpatient Pharmacy Version 7 Technician's User Manual (PSO*7.0*700)	PSO_7_0_P700_TECH_UM.docx PSO_7_0_P700_TECH_UM.pdf	
Technical Manual/Security Guide - Outpatient Pharmacy V.7.0 (PSO*7.0*700)	PSO_7_0_P700_TM.docx PSO_7_0_P700_TM.pdf	Binary
Release Notes – Inbound ePrescribing (PSO*7.0*700)	PSO_7_0_P700_RN.docx PSO_7_0_P700_RN.pdf	Binary

4.4 Database Creation

No new database is required for the patch PSO*7.0*700.

4.5 Installation Scripts

No installation scripts are required for installation of patch PSO*7.0*700.

4.6 Cron Scripts

No Cron scripts are required for installation of patch PSO*7.0*700.

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*700 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 Installation Procedure

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. Users may NOT be on the system during the install of PSO*7*700. It is recommended that this patch be installed during non-peak hours.

NOTE: These backup files may get as large as 150 kilobytes. Make sure space is available before proceeding. Creating the backup files should take from 0 to 2 minutes to create backup files.

1) Distribution Load:

   Load the KIDS Distribution from the Packman Message using the Packman function "Install/Check Message."

2) 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*700
      a. Backup a Transport Global - This option will create a backup build of patch
         components. Respond "BUILD" at the "Select one of the following: B
          Build or R Routines" prompt.   **THIS IS CRITICAL TO ACCURATE PATCH
          BACKUP ON YOUR SYSTEM. **
      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 will allow you to ensure the
          integrity of the routines that are in the transport global.

3) KIDS Installation:
      a. Install the patch using the KIDS Installation Menu action
         "Install Package(s)" and the install name PSO*7.0*700.
      b. Respond "NO" at the "Want KIDS to Rebuild Menu Trees Upon Completion of
         Install?" prompt.
      c. Respond "NO" at the "Want KIDS to INHIBIT LOGONs during the install?" prompt.
      d. Respond "NO" at the "Want to DISABLE Scheduled Options,
          Menu Options, and Protocols?" prompt.

4.8.1 Back-out Plan

To back-out data from a production account could cause broken pointers, <UNDEFINED> errors and hard MUMPS crashes. The back-out plan for data only patches is to report your findings and wait for a repair patch. Contact Help desk to log a ticket.

4.8.2 Patch Verification

Kernel Installation & Distribution System-> Utilities-> Install. File Print option can be used to check for any errors plus the status of the install being Completed.

4.9 Post-Installation Instructions

There are no additional steps to be completed in order to finalize installation of this patch.

4.10 Routine Information

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The second line of each of these routines now looks like:
 ;;7.0;OUTPATIENT PHARMACY;**[Patch List]**;DEC 1997;Build 255

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

Routine Name: PSO700PI
     Before:       n/a   After: B44912255   **700**
Routine Name: PSODIR1
     Before:B117923004   After:B118043086   **23,46,78,102,121,131,146,166,
                                             184,222,268,206,266,340,391,
                                             444,446,505,543,457,574,612,
                                             686,700**
Routine Name: PSOERALL
     Before:       n/a   After:B120636335   **700**
Routine Name: PSOERHL0
     Before:       n/a   After:B121070908   **700**
Routine Name: PSOERHL1
     Before:       n/a   After: B23585360   **700**
Routine Name: PSOERPC0
     Before:       n/a   After:B200854807   **700**
Routine Name: PSOERPC1
     Before:       n/a   After:B142593598   **700**
Routine Name: PSOERPC2
     Before:       n/a   After:  B7710980   **700**
Routine Name: PSOERPR0
     Before:       n/a   After: B42460343   **700**
Routine Name: PSOERPR1
     Before:       n/a   After: B53701907   **700**
Routine Name: PSOERPR2
     Before:       n/a   After: B34679017   **700**
Routine Name: PSOERPT0
     Before:       n/a   After:B103147741   **700**
Routine Name: PSOERPT1
     Before:       n/a   After: B94555733   **700**
Routine Name: PSOERPT2
     Before:       n/a   After: B18900786   **700**
Routine Name: PSOERPV1
     Before:       n/a   After: B14909686   **700**
Routine Name: PSOERRX0
     Before:       n/a   After: B99582585   **700**
Routine Name: PSOERRX1
     Before:       n/a   After:B108656993   **700**
Routine Name: PSOERUT
     Before:  B2212347   After: B45643439   **692,700**
Routine Name: PSOERUT0
     Before:       n/a   After:B108445469   **700**
Routine Name: PSOERUT1
```

```
      Before:        n/a  After: B49401821  **700**
Routine Name: PSOERUT2
      Before:        n/a  After:B154595210  **700**
Routine Name: PSOERUT3
      Before:        n/a  After: B71997905  **700**
Routine Name: PSOERUT4
      Before:        n/a  After:B149314150  **700**
Routine Name: PSOERUT5
      Before:        n/a  After:B176056414  **700**
Routine Name: PSOERUT6
      Before:        n/a  After: B12929316  **700**
Routine Name: PSOERX1
      Before:  B1264803  After:  B1366149  **467,520,527,508,551,581,635,
                                             617,700**
Routine Name: PSOERX1A
      Before:B226817121  After:B238628329  **467,527,508,551,581,617,669,700**
Routine Name: PSOERX1B
      Before:B159757583  After:B187424113  **467,506,520,527,508,551,591,
                                             606,581,617,700**
Routine Name: PSOERX1C
      Before:B114763111  After:B119987173  **467,520,527,508,551,581,617,
                                             646,700**
Routine Name: PSOERX1E
      Before:  B1908867  After: B20227172  **581,700**
Routine Name: PSOERX1F
      Before:B156552550  After:B176636135  **617,651,700**
Routine Name: PSOERX1G
      Before:B182938181  After:B173422954  **617,646,689,700**
Routine Name: PSOERX1H
      Before:        n/a  After:  B1469522  **700**
Routine Name: PSOERXD1
      Before:B167376443  After: B61765873  **467,520,551,582,581,635,617,
                                             651,689,700**
Routine Name: PSOERXD2
      Before:B183005048  After:B182366488  **467,506,520,508,551,581,617,
                                             651,689,700**
Routine Name: PSOERXD3
      Before:  B7653993  After: B12463872  **651,700**
Routine Name: PSOERXEN
      Before: B22187992  After: B25939445  **508,581,617,700**
Routine Name: PSOERXH1
      Before: B37438342  After: B43557715  **467,527,508,581,617,700**
Routine Name: PSOERXH2
      Before:        n/a  After:  B5940949  **700**
Routine Name: PSOERXI1
      Before:B214099544  After: B47133714  **581,617,692,706,700**
Routine Name: PSOERXI2
      Before:        n/a  After: B95050067  **700**
Routine Name: PSOERXIA
      Before: B81005829  After: B88122150  **581,700**
Routine Name: PSOERXIB
      Before: B57255225  After: B57927286  **581,700**
Routine Name: PSOERXIC
      Before: B14137332  After: B14485808  **581,700**
Routine Name: PSOERXP1
      Before: B28700221  After:  B6271070  **467,520,527,551,581,700**
Routine Name: PSOERXR1
      Before: B31817644  After:  B4504672  **467,520,527,581,545,700**
Routine Name: PSOERXU1
      Before:B169224625  After:B174726367  **467,520,508,551,565,581,617,
                                             651,700**
Routine Name: PSOERXU3
      Before:B189510920  After:B189943231  **508,591,606,581,617,646,700**
Routine Name: PSOERXU4
      Before: B72585508  After: B93420978  **520,508,551,581,635,617,651,700**
Routine Name: PSOERXU6
      Before:B124286819  After:B132205310  **508,551,581,631,617,672,715,700**
Routine Name: PSOERXU7
      Before: B44861191  After: B49240419  **581,617,700**
Routine Name: PSOERXU8
      Before: B16282202  After: B17242344  **581,617,700**
Routine Name: PSOERXU9
```

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        Before: B30267841    After: B44860046   **617,700**
Routine Name: PSOERXUT
     Before:B134426845    After:B153985248   **617,667,651,718,700**
Routine Name: PSOERXUX
     Before:       n/a    After: B14640367   **700**
Routine Name: PSOLMPO
     Before:  B1379839    After:  B1512919   **46,225,436,700**
Routine Name: PSOLMPO1
     Before:  B1200387    After:  B1483032   **46,71,225,700**
Routine Name: PSOLMRN
     Before:   B821442    After:   B899068   **11,46,84,225,386,700**
Routine Name: PSONEW
     Before: B39804624    After: B39838062   **11,27,32,46,94,130,268,225,
                                             251,379,390,417,313,411,457,
                                             524,711,545,700**
Routine Name: PSONFI
     Before:  B8543831    After:  B9346460   **46,94,131,225,391,700**
Routine Name: PSOORCPY
     Before: B57944618    After: B58343473   **10,21,27,32,46,100,117,148,
                                             313,411,444,468,504,477,441,
                                             545,700**
Routine Name: PSOOREDT
     Before:B104267007    After:B104661775   **4,20,27,37,57,46,78,102,104,
                                             119,143,148,260,281,304,289,
                                             298,379,377,391,313,427,411,
                                             505,517,574,524,617,441,700**
Routine Name: PSOORFI1
     Before:B110132560    After:B118025167   **7,15,23,27,32,44,51,46,71,
                                             90,108,131,152,186,210,222,258,
                                             260,225,391,408,444,467,505,
                                             617,441,651,700**
Routine Name: PSOORFI3
     Before: B77850540    After: B85211636   **15,27,32,46,84,99,130,117,
                                             139,172,225,300,384,372,505,
                                             557,700**
Routine Name: PSOORFI4
     Before: B77664295    After: B78885315   **46,74,78,99,117,131,207,258,
                                             274,300,308,251,384,391,444,
                                             441,700**
Routine Name: PSOORNE4
     Before:B101921491    After:B106064020   **11,27,32,36,46,75,96,103,99,
                                             117,131,225,386,390,391,313,
                                             411,661,441,700**
Routine Name: PSOORNEW
     Before:B136066922    After:B141690400   **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,
                                             486,446,505,517,508,457,581,
                                             617,441,651,700**
Routine Name: PSOORUT3
     Before:  B9741935    After:  B9927373   **5,25,243,700**

Routine list of preceding patches: 243, 545, 557, 669, 686, 689, 706, 715
                       718
```

4.11 Post-Installation Procedure

There are no additional steps to be completed to finish patch PSO*7*700.

4.12 Database Tuning

No database tuning is required before or after deployment of PSO*7.0*700.

NOTE: Installation of PSO*7.0*700 is completed. The following procedure is to be followed only if PSO*7.0*700 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 YourIT ServiceNow 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*700.

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*700 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*700.

5.2.2 User Acceptance Testing

Initial Operating Capabilities (IOC) Testing for patch PSO*7.0*700 occurred from January 23, 2023 to November 14, 2023.

5.3 Back-Out Criteria

Local Facility Management would need to determine patch PSO*7.0*700 is not appropriate for their facility.

5.4 Back-Out Risks

By backing out PSO*7.0*700, the local facility will not be able to use the IEP functionality to validate and process Inbound ePrescriptions (eRxs) from external providers.

5.5 Authority for Back-Out

Local Facility Management has the authority to back-out patch PSO*7.0*700.

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 eR$_X$" to submit a YourIT ServiceNow 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 eR$_X$es 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*700.

6.5 Rollback Procedure

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