MOCHA 3.0 Pharmacogenomics (PGx) Order Checks Combined Build

Deployment, Installation, Back-Out, and Rollback Guide

National Drug File PSN*4.0*576

Pharmacy Data Management PSS*1.0*262

Inpatient Pharmacy PSJ*5.0*447

Outpatient Pharmacy PSO*7.0*737

Order Entry/Results Reporting OR*3.0*626

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Artifact Rationale

This document describes the Deployment, Installation, Back-out, and Rollback Plan for 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 appropriately, to reflect particulars of these procedures at a single or at multiple locations.

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1. Introduction

This document describes how to deploy and install the MOCHA 3.0 Pharmacogenomics (PGx) Order Checks combined build (consisting of individual patches PSN*4.0*576 and PSS*1.0*262 and a multi-build including patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626) as well as how to back-out the product and rollback to a previous version or data set. This document is a companion to the project charter and management plan for this effort. In cases where a non-developed Commercial Off the Shelf (COTS) product is being installed, the vendor provided User and Installation Guide may be used, but the Back-out Recovery strategy still needs to be included in this document.

1.1. Purpose

The purpose of this plan is to provide a single, common document that describes how, when, where, and to whom the combined build MOCHA 3.0 PGx Order Checks (consisting of individual patches PSN*4.0*576 and PSS*1.0*262 and a multi-build including patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626) 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

PSN*4.0*396 must be installed BEFORE PSN*4.0*576

PSS*1.0*253 must be installed BEFORE PSS*1.0*262

PSS*1.0*254 must be installed BEFORE PSS*1.0*262

PSJ*5.0*426 must be installed BEFORE PSJ*5.0*447

PSO*7.0*417 must be installed BEFORE PSO*7.0*737

PSO*7.0*747 must be installed BEFORE PSO*7.0*737

OR*3.0*405 must be installed BEFORE OR*3.0*626

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	Department of Veterans Affairs (VA) Office of Information and Technology (OIT), Health Services Portfolio (HSP) Patient Care Services (PCS), and Program Management Office (PMO)	Deployment	Plan and schedule deployment	Planning
2	Health Product Support and Field Operations (FO)	Deployment	Determine and document the roles and responsibilities of those involved in the deployment	Planning
3	Field Testing (Initial Operating Capability-IOC), Health Product Support Testing & VIP Release Agent Approval	Deployment	Test for operational readiness	Testing
4	Application Coordinators	Release Deployment	Application Coordinators release patches	Deployment
5	HSP PCS and FO	Deployment	Execute deployment	Deployment
6	OIT, Development, Security, and Operations (DevSecOps) Infrastructure Operations (IO) and Individual Veterans Administration Medical Centers (VAMCs)	Installation	Plan and schedule installation	Deployment
7	Facility Area Manager and OIT support, which may be local or regional	Back-out	Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out)	Deployment
8	VA OIT, HSP PCS, and the Development Team	Post Deployment	Hardware, Software and System Support	Warranty

3. Deployment

The deployment is planned as a national general availability release. The scheduling of test/mirror installs, testing, and the deployment to production will be at the sites' discretion.

A national release is planned after testing has been successfully completed at initial operating capability (IOC) test sites.

Deployment will be performed by the local or regional OIT staff and supported by team members from these organizations: FO and Enterprise Operations. Other teams may provide additional support.

3.1. Timeline

The deployment and installation is scheduled to run for 14 days, as depicted in the master deployment schedule for Pharmacy Operational Updates.

3.2. Site Readiness Assessment

This section discusses the locations that will receive the deployment of the combined build MOCHA 3.0 PGx Order Checks (consisting of individual patches PSN*4.0*576 and PSS*1.0*262 and a multi-build including patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626)

3.2.1. Deployment Topology (Targeted Architecture)

This release will be deployed to all VistA instances.

3.2.2. Site Information (Locations, Deployment Recipients)

The IOC test sites are:

- Durham, NC
- Madison, WI
- Phoenix, AZ
- Shreveport, LA

Upon national release all VAMCs are expected to install this patch prior to or on the compliance date. The software will be distributed through Forum.

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

Refer to the following table (Table 5: Software Specifications) which describes the software specifications required at each site prior to deployment.

Table 5: Software Specification

Required Software	Make	Version	Configuration	Manufacturer	Other
Fully patched National Drug File package within VistA (including PSN*4.0*396)	VistA	4.0	N/A	Veterans Administration	N/A
Fully patched Pharmacy Data Management package within VistA (including PSS*1.0*253 and PSS*1.0*254)	VistA	1.0	N/A	Veterans Administration	N/A
Fully patched Inpatient Medications package within VistA (including PSJ*5.0*426)	VistA	5.0	N/A	Veterans Administration	N/A
Fully patched Outpatient Pharmacy package within VistA	VistA	7.0	N/A	Veterans Administration	N/A

Required Software	Make	Version	Configuration	Manufacturer	Other
(including PSO*7.0*417 and PSO*7.0*747)					
Fully patched Order Entry/Results Reporting package within VistA (including OR*3.0*405)	VistA	3.0	N/A	Veterans Administration	N/A
VA FileMan	VistA	22.2	N/A	Veterans Administration	N/A
Kernel	VistA	8.0	N/A	Veterans Administration	N/A
Kernel Toolkit	VistA	7.3	N/A	Veterans Administration	N/A
VA MailMan	VistA	8	N/A	Veterans Administration	N/A

3.3.4. Communications

For national release, sites will receive communication that the release has occurred, which will normally be an Action Item or Bulletin.

Sites will use their internal communications to let their users know about upcoming installations and any associated downtime. This is critical as users can often slow the installation process if they are on the system while installers are trying to get the software installed.

Clinical Application Coordinators (CACs), installers, and other site personnel (as determined by the site) will need to coordinate installation dates and times. In addition, other support personnel may need to be consulted – such as the Citrix support, Client Technologies (if required).

3.3.4.1. Deployment/Installation/Back-Out Checklist

The Release Management team will deploy the combined build for MOCHA 3.0 PGx Order Checks (consisting of individual patches PSN*4.0*576 and PSS*1.0*262 and a multi-build including patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626) which is tracked in the National Patch Module (NPM) in FORUM, nationally to all VAMCs. FORUM automatically tracks the patches as they are installed in the different VAMC production systems as described in the previous section. One can run a report in FORUM to identify when the patch was installed in the VistA production at each site, and by whom. A report can also be run, to identify which sites have not installed the patch in their VistA production system as of that moment in time.

Therefore, this information does not need to be manually tracked. The table is included below if manual tracking is desired.

Table 6: Deployment/Installation/Back-Out Checklist

Activity	Day	Time	Individual who completed task
Deploy	TBD	TBD	TBD
Install	TBD	TBD	TBD
Back-Out	TBD	TBD	TBD

4. Installation

4.1. Pre-installation and System Requirements

The combined build for MOCHA 3.0 PGx Order Checks (consisting of individual patches PSN*4.0*576 and PSS*1.0*262 and a multi-build including patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626) 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

Below is a list of the applications involved in this project along with their patch numbers.

APPLICATION/VERSION	PATCH
NATIONAL DRUG FILE v4.0	PSN*4.0*576
PHARMACY DATA MANAGEMENT v1.0	PSS*1.0*262
INPATIENT MEDICATIONS v5.0	PSJ*5.0*447
OUTPATIENT PHARMACY v7.0	PSO*7.0*737
ORDER ENTRY/RESULTS REPORTING v3.0	OR*3.0*626

The VistA patches in this release should be installed into the test/mirror/pre-prod accounts before the production account as is the normal VistA patch installation standard convention. When installing any VistA patch, sites should utilize the option “Backup a Transport Global” to create a backup message of the “Build (including routines)” exported with this patch. Pre- and post-installation checksums are found in the Patch Description in the FORUM NPM.

4.3. Download and Extract Files

Download and extract files are not applicable for the PSN*4.0*576 or PSS*1.0*262 patches that are a part of the overall combined build as they are standard PackMan installations.

The patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626 are bundled together into a multi-build for MOCHA 3.0 PGx Order Checks. The file name is MOCHA_3_0_PGX_COMBINED_BUILD_1_0.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/

4.4. Database Creation

Database creation is not applicable for this VistA Patch.

4.5. Installation Scripts

Installation scripts are not applicable for this VistA patch.

4.6. Cron Scripts

Cron scripts are not applicable for this VistA patch.

4.7. Access Requirements and Skills Needed for the Installation

To install this VistA patch, the patch installer must be an active user on the VistA system and have access to the VistA menu option "Kernel Installation & Distribution System" [XPD MAIN] and have VistA security keys XUPROG and XUPROGMODE. Knowledge on how to install VistA patches using the items on this menu option is also a required skill.

4.8. Installation Procedure

NOTE: The following is the required installation order:

- **PSN*4.0*576**
- **PSS*1.0*262**
- **MOCHA 3.0 PGX COMBINED BUILD 1.0**

Installation Instructions for **PSN*4.0*576**:

1. Choose the PackMan message containing this build. Then select the INSTALL/CHECK MESSAGE PackMan option to load the build.
2. From the Kernel Installation and Distribution System Menu, select the Installation Menu. From this menu,
    a. Select the Verify Checksums in Transport Global option to confirm the integrity of the routines that are in the transport global. When prompted for the INSTALL NAME enter the patch name, **PSN*4.0*576**.
    b. Select the Backup a Transport Global option to create a backup message. You must use this option and specify what to backup: the entire Build or just Routines. The backup message can be used to restore the routines and components of the build to the pre-patch condition.
        i. At the Installation option menu, select Backup a Transport Global.
        ii. At the Select INSTALL NAME prompt, enter your build **PSN*4.0*576**.
        iii. When prompted for the following, enter "R" for Routines or "B" for Build.

Select one of the following:

B Build

R Routines

Enter response: Build

iv. When prompted "Do you wish to secure this message? NO//", press <enter> and take the default response of "NO".

v. When prompted with, "Send mail to: Last name, First Name", press <enter> to take default recipient. Add any additional recipients.

vi. When prompted with "Select basket to send to: IN//", press <Enter> and take the default IN mailbox or select a different mailbox.

c. You may also elect to use the following options:

i. Print Transport Global - This option will allow you to view the components of the Kernel Installation and Distribution System (KIDS) build.

ii. 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 the components of this patch, such as routines, data dictionaries (DDs), templates, etc.

d. Select the Install Package(s) option and choose the patch to install.

i. When prompted 'Want KIDS to INHIBIT LOGONs during the install? NO//', answer 'NO'

ii. When prompted Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//, answer 'NO'

PSN*4*576 Post-Installation Summary:

- Populate the PGX ELIGIBLE (#46) field and the PGX SUPPRESSED (#47) field in the VA PRODUCT (#50.68) file with data.
- Populate the PGX ELIGIBLE (#5) field and the PGX SUPPRESSED (#6) field in the DRUG INGREDIENTS (#50.416) file with data.
- Generate a VistA mail message to the patch installer with information about these post-installation tasks.

Note: The patch installer should check his/her VistA email after patch installation for the email with the subject "PSN*4*576 Post-Install Complete".

This email will indicate if there were any problems encountered during the Post-Install process, and will provide instructions on what to do if there were any problems.

Installation Instructions for **PSS*1.0*262**:

1. Choose the PackMan message containing this build. Then select the INSTALL/CHECK MESSAGE PackMan option to load the build.
2. From the Kernel Installation and Distribution System Menu, select the Installation Menu. From this menu,
    a. Select the Verify Checksums in Transport Global option to confirm the integrity of the routines that are in the transport global. When prompted for the INSTALL NAME enter the patch name, **PSS*1.0*262**.
    b. Select the Backup a Transport Global option to create a backup message. You must use this option and specify what to backup: the entire Build or just Routines. The backup message can be used to restore the routines and components of the build to the pre-patch condition.
        i. At the Installation option menu, select Backup a Transport Global.
        ii. At the Select INSTALL NAME prompt, enter your build **PSS*1.0*262**.
        iii. When prompted for the following, enter "R" for Routines or "B" for Build.

            Select one of the following:

                B Build

                R Routines

            Enter response: Build
        iv. When prompted "Do you wish to secure this message? NO//", press <enter> and take the default response of "NO".
        v. When prompted with, "Send mail to: Last name, First Name", press <enter> to take default recipient. Add any additional recipients.
        vi. When prompted with "Select basket to send to: IN//", press <Enter> and take the default IN mailbox or select a different mailbox.
    c. You may also elect to use the following options:
        i. Print Transport Global - This option will allow you to view the components of the Kernel Installation and Distribution System (KIDS) build.
        ii. 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 the components of this patch, such as routines, data dictionaries (DDs), templates, etc.
    d. Select the Install Package(s) option and choose the patch to install.
        i. When prompted 'Want KIDS to Rebuild Menu Trees Upon Completion of Install? NO//', press <enter> and take the default response of "NO"
        ii. When prompted 'Want KIDS to INHIBIT LOGONs during the install? NO//', answer 'NO'

iii. When prompted 'Want to DISABLE Scheduled Options, Menu Options, and Protocols? NO//', answer 'NO'.

PSS*1*262 Post-Installation Summary:

- Add the new PSS PGX-HDR SERVICE entry to the WEB SERVICE (#18.02) file.
- Add the new PSS PGX-HDR SERVER entry to the WEB SERVER(#18.12) file.
- Enable and test the new PSS PGX-HDR SERVICE.
- Create two new entries in the APSP INTERVENTION TYPE (9009032.2) File: PHARMACOGENOMIC HIGH ORDER CHECK and PHARMACOGENOMIC MEDIUM ORDER CHECK.
- Remove the Check Drug Interaction [PSS CHECK DRUG INTERACTION] option from the Pharmacy Data Management [PSS MGR] Menu option.
- Add the Check Drug Interaction [PSS CHECK DRUG INTERACTION] option to the Order Check Management [PSS ORDER CHECK MANAGEMENT] Menu Option
- Add the Check Pharmacogenomic Interaction [PSS CHECK PGX INTERACTION] option to the Order Check Management [PSS ORDER CHECK MANAGEMENT] Menu Option.
- Add the Check Pharmacogenomic Interaction [PSS CHECK PGX INTERACTION] option to the Outpatient Pharmacy Manager [PSO MANAGER] Menu Option.
- Add the Check Pharmacogenomic Interaction [PSS CHECK PGX INTERACTION] option to the Pharmacist Menu [PSO USER1] Menu Option.
- Add the Check Pharmacogenomic Interaction [PSS CHECK PGX INTERACTION] option to the Unit Dose Medications [PSJU MGR] Menu Option.
- Add the Check Pharmacogenomic Interaction [PSS CHECK PGX INTERACTION] option to the IV Menu [PSJI MGR] Menu Option.
- Add the current Uniform Resource Locator (URL) to the VA PHARMACOGENOMICS URL (#103) field of the PHARMACY SYSTEM (#59.7) file.
- Generate a VistA mail message to the patch installer with information about these post-installation tasks.

Note: The patch installer should check his/her VistA email after patch installation for the Post-Install email. This email will indicate if there were any problems

during the post-install process and will provide instructions in the email on what to do if there were any problems. The subject of the email will be one of these two:

PSS*1*262 Installation has completed. (This indicates the PSS*1*262 Post-Install had no problems, and no further action required)

PSS*1*262 Installation has Issues (This indicates the PSS*1*262 had issues, and further action is required)

Installation Instructions for the **MOCHA 3.0 PGX COMBINED BUILD 1.0:**

The patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626 are bundled together into a multi-build for MOCHA 3.0 PGx Order Checks.

The file name is MOCHA_3_0_PGX_COMBINED_BUILD_1_0.KID, and the file can be found on the VA's SFTP download servers in the /srv/vista/patches/SOFTWARE folder.

1. Place the KIDS multi-build file **MOCHA_3_0_PGX_COMBINED_BUILD_1_0.KID** into a local directory and use the KIDS Load a Distribution option to load it into the transport global.
2. From the Kernel Installation and Distribution System Menu, select the Installation Menu. From this menu,
    a. Select the Verify Checksums in Transport Global option to confirm the integrity of the routines that are in the transport global. When prompted for the INSTALL NAME enter the patch name or build name (ex. **MOCHA 3.0 PGX COMBINED BUILD 1.0).**

    NOTE: Using <spacebar><enter> will not bring up a Multi-Package build even if it was loaded immediately before this step. It will only bring up the last patch in the build

    b. Select the Backup a Transport Global option to create a backup message. When prompted for Install Name, enter MOCHA 3.0 PGX COMBINED BUILD 1.0. When prompted to backup by either 'Build (including Routines)' or 'Routines Only', select 'B' for 'Build (including Routines)' .

    NOTE: Recommend adding "b" to backup multi-build filename for identification as a backup multi-build: MOCHA_3_0_PGX_COMBINED_BUILD_1_0b.KID

    c. 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.).

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

    e. From the Installation Menu, select the Install Package(s) option and choose the patch to install (**MOCHA 3.0 PGX COMBINED BUILD 1.0**).

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

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

MOCHA 3.0 PGX COMBINED BUILD 1.0 Post-Installation Summary:

OR*3*626 Post-Installation Summary:

- Create two new entries in the CPRS ORDER CHECKS (#100.8) File: PHARMACOGENOMICS HIGH and PHARMACOGENOMICS MODERATE.
- Set both new CPRS ORDER CHECKS to enabled and un-editable, along with setting the appropriate severity to each check.

NOTE: There is no mail message generated after the install of OR*3*626. To verify a successful Post-Install, review the install message of the OR*3*626 patch using the Install File Print [XPD PRINT INSTALL FILE] option located under the Utilities [XPD UTILITY] Menu option located under the Kernel Installation and Distribution [XPD MAIN] Menu option.

NOTE: There are no Post-install process for patches PSJ*5*447 and PSO*7*737.

4.9. POST-INSTALL MOCHA PGx Clinical Reminder Order Check (CROC) Update

This step should be executed by the Clinical Application Coordinator (CAC). Install the MOCHA PGx clinical reminder order check update following the instructions in the attached MOCHA PGx CROC Update document.

-
MOCHA_PGx_CROC_Update.pdf

4.10. Installation Verification Procedure

Successful installation can be verified by reviewing the first 2 lines of the routines contained in the patch. The second line will contain the patch number in the [PATCH LIST] section.

The option Calculate and Show Checksum Values [XTSUMBLD-CHECK] can be run to compare the routine checksums to what is documented in the patch.

4.10.1. Routine (Code) Installation Verification

Verify the routine checksums (for the individual patches PSN*4.0*576 and PSS*1.0*262 and for the multi-build which consists of patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626) 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 the option Calculate and Show Checksum Values [XTSUMBLD-CHECK] for each patch, (PSN*5.0*576, PSS*1.0*262, PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626).

Example:

```
Use the following VistA option:

CALculate and Show Checksum Values

This option determines the current Old (CHECK^XTSUMBLD) or New
(CHECK1^XTSUMBLD)
 logic checksum of selected routine(s).


     Select one of the following:


          1         Old
          2         New


New or Old Checksums: New//
New CheckSum

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: PSN*4.0*576[1]
```

[1]NOTE: To verify all routine checksums, this must be run FIVE times, once for each BUILD NAME that is a part of the combined build, and the two stand-alone patches:

- **PSN*4.0*576**
- **PSS*1.0*262**
- **PSJ*5.0*447**
- **PSO*7.0*737**
- **OR*3.0*626**

4.10.2. Data Definition Installation Verification

Use Fileman to confirm the following partial data dictionary updates were installed by PSN*4.0*576:

- PGX ELIGIBLE (#46) field in the VA PRODUCT (#50.68) file
- PGX SUPPRESSED (#47) field in the VA PRODUCT (#50.68) file

1. From Fileman, select the DATA DICTIONARY UTILITY menu.
2. Select the LIST FILE ATTRIBUTES option.
3. Select the VA PRODUCT (#50.68) file at the prompt 'START WITH What File'.
4. Accept the default (VA PRODUCT) at the prompt 'GO TO What File'.
5. Accept the default (STANDARD).
6. Enter "46" at the prompt 'Start with field:'.
7. Enter "47" at the prompt 'Go to field:'.
8. Accept the blank default at the 'DEVICE:' prompt to print to the screen.
9. Accept the default at the 'Right Margin:' prompt.
10. The output should display the new fields installed by PSN*4.0*576:

```
START WITH WHAT FILE: 50.68  VA PRODUCT
                                        (34014 ENTRIES)
      GO TO WHAT FILE: VA PRODUCT//     (34014 ENTRIES)
      SELECT SUB-FILE:
SELECT LISTING FORMAT: STANDARD//
START WITH FIELD: FIRST// PGX ELIGIBLE
GO TO FIELD: PGX SUPPRESSED
DEVICE: LINUX TELNET /SSH
STANDARD DATA DICTIONARY #50.68 -- VA PRODUCT FILE          XX/XX/25    PAGE 1
STORED IN ^PSNDF(50.68,  (34014 ENTRIES)   SITE: XXXX ISC ACCOUNT  UCI:XXXX,XXX
(VERSION 4.0)

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

50.68,46      PGX ELIGIBLE           PGX;1 SET (REQUIRED) (AUDITED)

                                   '1' FOR YES;
                                   '0' FOR NO;
              LAST EDITED:         APR 18, 2025
              HELP-PROMPT:         ENTER 'YES' IF YOU WANT MEDICATION ORDERS FOR
                                   DRUGS MATCHED TO THIS VA PRODUCT TO PARTICIPATE
                                   IN PHARMACOGENOMIC (PGX) ORDER CHECKS.
              DESCRIPTION:         IF THIS FIELD IS SET TO YES, THEN ANY
                                   MEDICATION ORDER FOR A DRUG MATCHED TO THIS VA
                                   PRODUCT WILL PARTICIPATE IN PHARMACOGENOMIC
                                   (PGX) ORDER CHECKS.

              TECHNICAL DESCR:     THIS FIELD IS SET AT THE NATIONAL LEVEL AND IS
                                   NOT LOCALLY EDITABLE.
```

```
                AUDIT:            YES, ALWAYS
                DELETE AUTHORITY: ^
                WRITE AUTHORITY:  ^
                CROSS-REFERENCE:  50.68^APGX^MUMPS
                                  1)= I $G(X) S ^PSNDF(50.68,"APGX",DA)=""
                                  2)= K ^PSNDF(50.68,"APGX",DA)
                                  THIS CROSS REFERENCE IDENTIFIES VA PRODUCTS
                                  ELIGIBLE FOR PHARMACOGENOMIC ORDER CHECKING.


50.68,47        PGX SUPPRESSED          PGX;2 SET (REQUIRED) (AUDITED)

                                  '1' FOR YES;
                                  '0' FOR NO;
                LAST EDITED:      MAR 09, 2024
                HELP-PROMPT:      ENTER 'YES' IF YOU WANT MEDICATION ORDERS FOR
                                  PROFILE DRUGS MATCHED TO THIS VA PRODUCT TO
                                  PARTICIPATE IN SUPPRESSION RULES FOR PGX ORDER
                                  CHECKS.
                DESCRIPTION:      IF THIS FIELD IS SET TO YES, THEN ANY PROFILE
                                  MEDICATION ORDER FOR A DRUG MATCHED TO THIS VA
                                  PRODUCT WILL PARTICIPATE IN THE SUPPRESSION
                                  RULES FOR PHARMACOGENOMIC (PGX) ORDER CHECKS.

                TECHNICAL DESCR:  THIS FIELD IS SET AT THE NATIONAL LEVEL AND IS
                                  NOT LOCALLY EDITABLE.

                AUDIT:            YES, ALWAYS
                DELETE AUTHORITY: ^
                WRITE AUTHORITY:  ^
```

Use Fileman to confirm the following partial data dictionary updates were installed by PSN*4.0*576:

- PGX ELIGIBLE (#5) field in the DRUG INGREDIENTS (#50.416) file
- PGX SUPPRESSED (#6) field in the DRUG INGREDIENTS (#50.416) file

11. From Fileman, select the DATA DICTIONARY UTILITY menu.
12. Select the LIST FILE ATTRIBUTES option.
13. Select the DRUG INGREDIENTS (#50.416) file at the prompt ‘START WITH What File’.
14. Accept the default (DRUG INGREDENTS) at the prompt ‘GO TO What File’.
15. Accept the default (STANDARD).
16. Enter “5” at the prompt ‘Start with field:’.
17. Enter “6” at the prompt ‘Go to field:’.
18. Accept the blank default at the ‘DEVICE:’ prompt to print to the screen.
19. Accept the default at the ‘Right Margin:’ prompt.
20. The output should display the new fields installed by PSN*4.0*476:

```
SELECT DATA DICTIONARY UTILITY OPTION: LIST FILE ATTRIBUTES
```

```
 START WITH WHAT FILE: VA PRODUCT// 50.416  DRUG INGREDIENTS
                                          (5713 ENTRIES)
      GO TO WHAT FILE: DRUG INGREDIENTS//   (5713 ENTRIES)
      SELECT SUB-FILE:
SELECT LISTING FORMAT: STANDARD//
START WITH FIELD: FIRST// PGX ELIGIBLE
GO TO FIELD: PGX SUPPRESSED
DEVICE: LINUX TELNET /SSH
STANDARD DATA DICTIONARY #50.416 -- DRUG INGREDIENTS FILE    XX/XX/25    PAGE 1
STORED IN ^PS(50.416,  (5713 ENTRIES)   SITE: XXXX ISC ACCOUNT    UCI: XXXX,XXX
(VERSION 4.0)

DATA          NAME                  GLOBAL        DATA
ELEMENT       TITLE                 LOCATION      TYPE
-------------------------------------------------------------------------------
50.416,5      PGX ELIGIBLE           PGX;1 SET (REQUIRED) (AUDITED)

                                   '1' FOR YES;
                                   '0' FOR NO;
              LAST EDITED:         MAR 10, 2024
              HELP-PROMPT:         ENTER 'YES' IF YOU WANT MEDICATION ORDERS FOR
                                   DRUGS CONTAINING THIS INGREDIENT TO PARTICIPATE
                                   IN PGX ORDER CHECKS.
              DESCRIPTION:         IF THIS FIELD IS SET TO YES, THEN ANY
                                   MEDICATION ORDER FOR A DRUG CONTAINING THIS
                                   INGREDIENT WILL PARTICIPATE IN PHARMACOGENOMIC
                                   (PGX) ORDER CHECKS.

              TECHNICAL DESCR:     THIS FIELD IS SET AT THE NATIONAL LEVEL AND NOT
                                   LOCALLY EDITABLE.

              AUDIT:               YES, ALWAYS
              DELETE AUTHORITY:    ^
              WRITE AUTHORITY:     ^

50.416,6      PGX SUPPRESSED         PGX;2 SET (REQUIRED) (AUDITED)

                                   '1' FOR YES;
                                   '0' FOR NO;
              LAST EDITED:         MAR 10, 2024
              HELP-PROMPT:         ENTER 'YES' IF YOU WANT MEDICATION ORDERS FOR
                                   PROFILE DRUGS CONTAINING THIS INGREDIENT TO
                                   PARTICIPATE IN SUPPRESSION RULES FOR PGX ORDER
                                   CHECKS.
              DESCRIPTION:         IF THIS FIELD IS SET TO YES, THEN ANY PROFILE
                                   MEDICATION ORDER CONTAINING THIS INGREDIENT
                                   WILL PARTICIPATE IN THE SUPPRESSION RULES FOR
                                   PHARMACOGENOMIC (PGX) ORDER CHECKS.

              TECHNICAL DESCR:     THIS FIELD IS SET AT THE NATIONAL LEVEL AND NOT
                                   LOCALLY EDITABLE.

              AUDIT:               YES, ALWAYS
              DELETE AUTHORITY:    ^
              WRITE AUTHORITY:     ^
```

4.10.3. Data Definition Installation Verification

Use Fileman to confirm the following new files were installed by PSS*1.0*262:

- PHARMACOGENOMIC GENES (#51.26)
- PHARMACOGENOMIC PHENOTYPES (#51.28)
- PHARMACOGENOMIC EMAIL LOG (#51.29)

1. From Fileman, select the DATA DICTIONARY UTILITY menu.
2. Select the LIST FILE ATTRIBUTES option.
3. Select a file number from the list above
4. Verify that the file displays as selectable[2]

```
SELECT OPTION: DATA DICTIONARY UTILITIES
SELECT DATA DICTIONARY UTILITY OPTION: LIST FILE ATTRIBUTES
 START WITH WHAT FILE: DRUG INGREDIENTS// 51.26  PHARMACOGENOMIC GENES
                                          (19 ENTRIES)

      GO TO WHAT FILE: PHARMACOGENOMIC GENES//
```

[2]NOTE: In order to verify all new files were installed, this must be run THREE TIMES, once for each file number (51.26, 51.28, and 51.29)

Use Fileman to confirm the partial data dictionary update in the PHARMACY SYSTEM (#59.7) file of the new VA PHARMACOGENOMICS URL (#103) field was applied properly by PSS*1.0*262:

1. From Fileman, select the DATA DICTIONARY UTILITY menu.
2. Select the LIST FILE ATTRIBUTES option.
3. Select the PHARMACY SYSTEM (#59.7) file at the prompt 'START WITH What File'.
4. Accept the default (PHARMACY SYSTEM) at the prompt 'GO TO What File'.
5. Accept the default (STANDARD).
6. Enter "103" at the prompt 'Start with field:'.
7. Enter "103" at the prompt 'Go to field:'.
8. Accept the blank default at the 'DEVICE:' prompt to print to the screen.
9. Accept the default at the 'Right Margin:' prompt.
10. The output should display the new field installed by PSS*1.0*262:

```
SELECT OPTION: DATA DICTIONARY UTILITIES
SELECT DATA DICTIONARY UTILITY OPTION: LIST FILE ATTRIBUTES
 START WITH WHAT FILE: 59.7  PHARMACY SYSTEM
                                          (1 ENTRY)
      GO TO WHAT FILE: PHARMACY SYSTEM//   (1 ENTRY)
      SELECT SUB-FILE:
SELECT LISTING FORMAT: STANDARD//
START WITH FIELD: FIRST// 103  VA PHARMACOGENOMICS URL
GO TO FIELD: 103  VA PHARMACOGENOMICS URL
DEVICE:   LINUX TELNET /SSH
STANDARD DATA DICTIONARY #59.7 -- PHARMACY SYSTEM FILE       XX/XX/25    PAGE 1
```

```
STORED IN ^PS(59.7,  (1 ENTRY)   SITE: XXXX ISC SUPPORT ACCOUNT   UCI: XXXX,XXX
(VERSION 1.0)

DATA          NAME                    GLOBAL        DATA
ELEMENT       TITLE                   LOCATION      TYPE
-------------------------------------------------------------------------------
59.7,103      VA PHARMACOGENOMICS URL PGX;1 FREE TEXT

              INPUT TRANSFORM:  K:$L(X)>100!($L(X)<1) X
              MAXIMUM LENGTH:   100
              LAST EDITED:      OCT 27, 2024
              HELP-PROMPT:      ENTER THE URL FOR THE VA NATIONAL
                                PHARMACOGENOMICS PROGRAM (1 TO 100 CHARACTERS).
              DESCRIPTION:      THIS IS THE UNIFORM RESOURCE LOCATOR (URL) FOR
                                THE VA NATIONAL PHARMACOGENOMICS PROGRAM. THIS
                                URL WILL BE USED FOR DISPLAY WHEN THE URL
                                NORMALLY RECEIVED FROM THE HEALTH DATA
                                REPOSITORY (HDR) IS NOT AVAILABLE.

              DELETE AUTHORITY: ^
              WRITE AUTHORITY:  ^
```

4.11. System Configuration

System configuration is not applicable for this VistA patch.

4.12. Database Tuning

Database tuning is not applicable for this VistA patch.

5. Back-Out Procedure

Back-Out pertains to a return to the last known good operational state of the software and appropriate platform settings. In the event of a catastrophic failure, the Area Manager may make the decision to backout the patch and rollback any necessary database changes. The Area Manager, working with site personnel, tier 2 product support, and the development team will be involved in the decision. However, the Area Manager will make the final decision.

The back-out procedure for these patches are to install the backup builds created in step 2.b. of the Installation Procedures for the MOCHA 3.0 PGx Combined Build (consisting of individual patches PSN*4.0*576 and PSS*1.0*262 and a multi-build including patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626).

IMPORTANT: When install the backups, the backups must be the backups made from the original install of the Mocha 3.0 patches, and the backups must be installed in this order:

MOCHA 3.0 PGX COMBINED BUILD 1.0

PSS*1*262

PSN*4*576

A follow up Back-Out patch will be nationally released sometime after all the successful backouts have occurred. That patch is PSS*1*267. It will export the 2 new entries in the APSP

INTERVENTION TYPE (9009032.2) File (PHARMACOGENOMIC HIGH ORDER CHECK and PHARMACOGENOMIC MEDIUM ORDER CHECK) to all sites since it is considered national standard data. That data is not backed out as part of the PSS*1*262 backout. All sites will be required to install PSS*1*267 once it is released.

5.1. Back-Out Strategy

Back-out Procedures are only needed if there are major problems (examples include the KIDS notice of incompletion or hard errors) resulting from the installation of this patch. You must have concurrence from Health Product Support (HPS) before a back-out can occur. Enter a ServiceNow ticket to obtain this concurrence.

Although it is unlikely due to care in collecting approved requirements, Software Quality Assurance (SQA) review and multiple testing stages (Unit testing, Component Integration Testing, User Acceptance Testing) a back-out decision due to major issues with this patch could occur during site Mirror Testing, Site Production Testing or after National Release to the Field. The strategy would depend upon the stage of testing when the decision is made. If during Site Production Testing, unless the patch produces catastrophic problems, the normal VistA response would be for a new version of the test patch correcting defects to be produced, retested and upon successfully passing development team testing would be resubmitted to the site for testing. If the defects were not discovered until after national release but during the warranty support period, a new patch will be entered into the National Patch Module on Forum and go through all the necessary testing milestones and reviews.

5.2. Back-Out Considerations

Changes implemented in the combined build for MOCHA 3.0 PGx Order Checks (consisting of individual patches PSN*4.0*576 and PSS*1.0*262 and a multi-build including patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626) should be backed out in their entirety, they are generally interdependent and should not be backed out on an item-by-item basis.

5.2.1. Load Testing

Load Testing is not applicable for this VistA patch.

5.2.2. User Acceptance Testing

User Acceptance is detailed in the Pharmacy Operational Updates Jira project site.

5.3. Back-Out Criteria

It may be decided to back out this patch if the project is canceled, the requested changes implemented by the patch are no longer desired by VA OIT and the Pharmacy Business team, or the patch produces catastrophic problems.

5.4. Back-Out Risks

Back-out risks include the current state VistA handling of Inpatient, Outpatient, and CPRS functionality.

5.5. Authority for Back-Out

Any back-out decision should be a joint decision of the Area Manager, the Business Owner (or their representative) and the Program Manager with input from the HSP PCS Application Coordinator, HPS Support, the project development team.

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.

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

The combined build for MOCHA 3.0 PGx Order Checks (consisting of individual patches PSN*4.0*576 and PSS*1.0*262 and a multi-build including patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626) contains the following build components:

- Routines
- Data Dictionary (new files)
- Partial Data Dictionary (new fields)

Please log a ServiceNow ticket for assistance in backing out this patch since these installed patches contain 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 components to their pre-patch condition.

Example: Combined build restoration from backups

```
MULTI-BUILD restoration from backup:


Select Kernel Installation & Distribution System <TEST ACCOUNT> Option: installation


Select Installation <TEST ACCOUNT> Option: 1  Load a Distribution
Enter a Host File: /srv/vista/xxx/user/hfs/xxxxx/MOCHA_3_0_PGX_COMBINED_BUILD_1_0b.KID

KIDS Distribution saved on Mar 25, 2025@11:14:03
Comment: Backup of MOCHA 3.0 PGX COMBINED BUILD 1.0, PSJ*5.0*447, PSO*7.

This Distribution contains Transport Globals for the following Package(s):
   MOCHA 3.0 PGX COMBINED BUILD 1.0b
   PSJ*5.0*447b
   PSO*7.0*737b
   OR*3.0*626b
Distribution OK!

Want to Continue with Load? YES//
Loading Distribution...

   MOCHA 3.0 PGX COMBINED BUILD 1.0b
   PSJ*5.0*447b
   PSO*7.0*737b
   OR*3.0*626b
Use INSTALL NAME: MOCHA 3.0 PGX COMBINED BUILD 1.0b to install this Distribution
.

Select OPTION NAME: XPD MAIN       Kernel Installation & Distribution System


          Edits and Distribution ...
          Utilities ...
          Installation ...
          Patch Monitor Main Menu ...

Select Kernel Installation & Distribution System <TEST ACCOUNT> Option: INStallation

   1      Load a Distribution
   2      Verify Checksums in Transport Global
   3      Print Transport Global
   4      Compare Transport Global to Current System
   5      Backup a Transport Global
   6      Install Package(s)
          Restart Install of Package(s)
          Unload a Distribution

Select Installation <TEST ACCOUNT> Option: INStall Package(s)
Select INSTALL NAME: MOCHA 3.0 PGX COMBINED BUILD 1.0b.0b      3/25/25@11:14:28
     => Backup of MOCHA 3.0 PGX COMBINED BUILD 1.0, PSJ*5.0*447, PSO*7.  ;Crea

This Distribution was loaded on Mar 25, 2025@11:14:28 with header of
   Backup of MOCHA 3.0 PGX COMBINED BUILD 1.0, PSJ*5.0*447, PSO*7.  ;Created on
Mar 25, 2025@11:14:03
   It consisted of the following Install(s):
MOCHA 3.0 PGX COMBINED BUILD 1.0b   PSJ*5.0*447b   PSO*7.0*737b    OR*3.0*626b
Checking Install for Package MOCHA 3.0 PGX COMBINED BUILD 1.0b

Install Questions for MOCHA 3.0 PGX COMBINED BUILD 1.0b


Checking Install for Package PSJ*5.0*447b

Install Questions for PSJ*5.0*447b
```

```
Checking Install for Package PSO*7.0*737b

Install Questions for PSO*7.0*737b


Checking Install for Package OR*3.0*626b

Install Questions for OR*3.0*626b



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//   Linux Telnet /SSh
------------------------------------------------------------------------------

 Install Started for MOCHA 3.0 PGX COMBINED BUILD 1.0b :
               Mar 25, 2025@11:14:46

Build Distribution Date: Mar 25, 2025

 Installing Routines:
               Mar 25, 2025@11:14:46

 Install Started for PSJ*5.0*447b :
               Mar 25, 2025@11:14:46

Build Distribution Date: Mar 25, 2025

 Installing Routines:
               Mar 25, 2025@11:14:46

 Updating Routine file...

 Updating KIDS files...

 PSJ*5.0*447b Installed.
               Mar 25, 2025@11:14:46

 NO Install Message sent

 Install Started for PSO*7.0*737b :
               Mar 25, 2025@11:14:46

Build Distribution Date: Mar 25, 2025

 Installing Routines:
               Mar 25, 2025@11:14:46

 Updating Routine file...

 Updating KIDS files...

 PSO*7.0*737b Installed.
               Mar 25, 2025@11:14:46

 NO Install Message sent

 Install Started for OR*3.0*626b :
               Mar 25, 2025@11:14:46

Build Distribution Date: Mar 25, 2025

 Installing Routines:
               Mar 25, 2025@11:14:46
```

```
Running Post-Install Routine: EN^ORY626RR

Disabling the Pharmacogenomics order checks...

Patch OR*3*262 rollback successful!

 Updating Routine file...

 Updating KIDS files...

 OR*3.0*626b Installed.
               Mar 25, 2025@11:14:46

 NO Install Message sent

 Updating Routine file...

 Updating KIDS files...

 MOCHA 3.0 PGX COMBINED BUILD 1.0b Installed.
               Mar 25, 2025@11:14:46

 No link to PACKAGE file


Install Completed
```

PSS*1.0*262 restoration from backup:

```
Select backup message from local mail system:

Subj: Backup of PSS*1.0*262 on Aug 06, 2025  [#XXXXXX] 08/06/25@10:37
8883 lines
From: USER,TEST  In 'IN' basket.   Page 1
------------------------------------------------------------------------------
$TXT Created by USER,TEST at XXXX-XXXX.XXX.XX.XXX  (KIDS) on Wednesday, 0
8/06/25 at 10:37

Warning:  Installing this backup patch message will install older versions
of routines and Build Components (options, protocols, templates, etc.).
Please verify with the Development Team that it is safe to install.

$END TXT
$KID PSS*1.0*262b
**INSTALL NAME**
PSS*1.0*262b
"BLD",13206,0)
PSS*1.0*262b^PHARMACY DATA MANAGEMENT^0^3250806^n
"BLD",13206,1,0)
^^5^5^3250806
"BLD",13206,1,1,0)
Backup of PSS*1.0*262 on Aug 06, 2025
"BLD",13206,1,2,0)

Type <Enter> to continue or '^' to exit: ^

Enter message action (in IN basket): Ignore// Xtract KIDS
Select PackMan function: I
     1   INSTALL SELECTED ROUTINE(S)
     2   INSTALL/CHECK MESSAGE
CHOOSE 1-2: 2  INSTALL/CHECK MESSAGE

Line 8    Message #304912    Unloading KIDS Distribution   PSS*1.0*262b
Build PSS*1.0*262b has been loaded before, here is when:
      PSS*1.0*262b   Install Completed
                     was loaded on Jul 17, 2024@11:38:11
      PSS*1.0*262b   Install Completed
                     was loaded on Mar 04, 2025@14:20:59
      PSS*1.0*262b   Install Completed
```

```
                    was loaded on Mar 25, 2025@11:15:51
OK to continue with Load? NO// YES

Distribution OK!

Want to Continue with Load? YES//
Loading Distribution...

   PSS*1.0*262b




Select Kernel Installation & Distribution System <TEST ACCOUNT> Option: Installa
tion


   1      Load a Distribution
   2      Verify Checksums in Transport Global
   3      Print Transport Global
   4      Compare Transport Global to Current System
   5      Backup a Transport Global
   6      Install Package(s)
          Restart Install of Package(s)
          Unload a Distribution

Select Installation <TEST ACCOUNT> Option: Install Package(s)
Select INSTALL NAME: PSS*1.0*262b      8/6/25@10:38:05
     => Backup of PSS*1.0*262 on Aug 06, 2025

This Distribution was loaded on Aug 06, 2025@10:38:05 with header of
   Backup of PSS*1.0*262 on Aug 06, 2025
   It consisted of the following Install(s):
   PSS*1.0*262b
Checking Install for Package PSS*1.0*262b

Install Questions for PSS*1.0*262b

Incoming Files:


   51.26     PHARMACOGENOMIC GENES
Note:  You already have the 'PHARMACOGENOMIC GENES' File.


   51.28     PHARMACOGENOMIC PHENOTYPES
Note:  You already have the 'PHARMACOGENOMIC PHENOTYPES' File.


   51.29     PHARMACOGENOMIC EMAIL LOG
Note:  You already have the 'PHARMACOGENOMIC EMAIL LOG' File.


   59.7      PHARMACY SYSTEM  (Partial Definition)
Note:  You already have the 'PHARMACY SYSTEM' File.

Want KIDS to Rebuild Menu Trees Upon Completion of Install? NO//


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// ;;9999  Linux Telnet /SSh
-------------------------------------------------------------------------------
```

```
 Install Started for PSS*1.0*262b :
               Aug 06, 2025@10:39:20

Build Distribution Date: Aug 06, 2025

 Installing Routines:
               Aug 06, 2025@10:39:20

 Installing Data Dictionaries: .
               Aug 06, 2025@10:39:20

 Installing PACKAGE COMPONENTS:

 Installing OPTION
               Aug 06, 2025@10:39:20

 Running Post-Install Routine: EN^PSS262RR

Removing the HDR server and HDR web service for MOCHA PGx

     PSS PGX-HDR SERVER web server successfully removed.

     PSS PGX-HDR SERVICE web service successfully removed.


Adding the new intervention type entries to the APSP INTERVENTION TYPE

 (#9009032.3) file:

 - PHARMACOGENOMIC HIGH ORDER CHECK intervention type already exists.

 - PHARMACOGENOMIC MEDIUM ORDER CHECK intervention type already exists.

Deleting VA PHARMACOGENOMICS URL (#103) field from PHARMACY SYSTEM (#59.7) File

Field #103 deleted from the PHARMACY SYSTEM (#59.7) File

Deleting files 51.26, 51.28, and 51.29

PHARMACOGENOMIC GENES (#51.26) File successfully deleted.

PHARMACOGENOMIC PHENOTYPES (#51.28) File successfully deleted.

PHARMACOGENOMIC EMAIL LOG (#51.29) File successfully deleted.


Restructuring the PSS menus:

PSS CHECK DRUG INTERACTION removed from PSS ORDER CHECK MANAGEMENT....

PSS CHECK DRUG INTERACTION added to the PSS MGR option.

Web Service removal is complete for PSS PGX-HDR SERVICE

APSP intervention type update is complete


 Updating Routine file...

 Updating KIDS files...

 PSS*1.0*262b Installed.
               Aug 06, 2025@10:39:21

Install Completed


PSN*4.0*576 restoration from backup:
```

```
Select backup message from local mail system:


Subj: Backup of PSN*4.0*576 on Mar 25, 2025  [#XXXXXX] 03/25/25@11:11  1739 lines
From: LAST,FIRST  In 'IN' basket.   Page 1
-------------------------------------------------------------------------------
$TXT Created by LAST,FIRST at XXXX.FO-BIRM.MED.VA.GOV  (KIDS) on Tuesday,
03/25/25 at 11:11

Warning:  Installing this backup patch message will install older versions
of routines and Build Components (options, protocols, templates, etc.).
Please verify with the Development Team that it is safe to install.

$END TXT
$KID PSN*4.0*576b
**INSTALL NAME**
PSN*4.0*576b
"BLD",13189,0)
PSN*4.0*576b^NATIONAL DRUG FILE^0^3250325^n
"BLD",13189,1,0)
^^5^5^3250325
"BLD",13189,1,1,0)
Backup of PSN*4.0*576 on Mar 25, 2025
"BLD",13189,1,2,0)

"BLD",13189,1,3,0)

Type <Enter> to continue or '^' to exit: ^

Enter message action (in IN basket): Ignore// Xtract KIDS
Select PackMan function: 6  INSTALL/CHECK MESSAGE

Line 8    Message #XXXXX    Unloading KIDS Distribution   PSN*4.0*576b
OK to continue with Load? NO// YES

Distribution OK!

Want to Continue with Load? YES//
Loading Distribution...

   PSN*4.0*576b


Select OPTION NAME: XPD MAIN       Kernel Installation & Distribution System


          Edits and Distribution ...
          Utilities ...
          Installation ...
          Patch Monitor Main Menu ...

Select Kernel Installation & Distribution System <TEST ACCOUNT> Option: INStallation

   1      Load a Distribution
   2      Verify Checksums in Transport Global
   3      Print Transport Global
   4      Compare Transport Global to Current System
   5      Backup a Transport Global
   6      Install Package(s)
          Restart Install of Package(s)
          Unload a Distribution

Select Installation <TEST ACCOUNT> Option: INStall Package(s)
Select INSTALL NAME: PSN*4.0*576b      3/25/25@11:15:24
     => Backup of PSN*4.0*576 on Mar 25, 2025

This Distribution was loaded on Mar 25, 2025@11:15:24 with header of
   Backup of PSN*4.0*576 on Mar 25, 2025
   It consisted of the following Install(s):
   PSN*4.0*576b
```

```
Checking Install for Package PSN*4.0*576b

Install Questions for PSN*4.0*576b

Incoming Files:


   50.416    DRUG INGREDIENTS  (Partial Definition)
Note:  You already have the 'DRUG INGREDIENTS' File.


   50.68     VA PRODUCT  (Partial Definition)
Note:  You already have the 'VA PRODUCT' 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//   Linux Telnet /SSh
-------------------------------------------------------------------------------

 Install Started for PSN*4.0*576b :
               Mar 25, 2025@11:16:11

Build Distribution Date: Mar 25, 2025

 Installing Routines:
               Mar 25, 2025@11:16:11

Running Post-Install Routine: EN^PSN576RR

Deleting PGx data from the DRUG INGREDIENT (#50.416) File...

Deleting PGx fields from the DRUG INGREDIENT (#50.416) File

PGX ELIGIBLE (#5) Field successfully deleted.

PGX SUPPRESSED (#6) Field successfully deleted.

Deleting PGx data from the VA PRODUCT (#50.68) File

Deleting PGx fields from the VA PRODUCT (#50.68) File

PGX ELIGIBLE (#46) Field successfully deleted.

PGX SUPPRESSED (#47) Field successfully deleted.

 Updating Routine file...

 Updating KIDS files...

 PSN*4.0*576b Installed.
               Mar 25, 2025@11:16:11


Install Completed
```

5.7. Back-out Verification Procedure

Back-out may only be performed by installing the patch back-ups. 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.

Successful back-out can be confirmed by verification that the routine checksums have been restored to their pre-patch state, and the new components have been removed.

Backout Verification Steps

Routines:

Verify that the routine checksums for the combined build for MOCHA 3.0 PGx Order Checks (consisting of individual patches PSN*4.0*576 and PSS*1.0*262 and a multi-build including patches PSJ*5.0*447, PSO*7.0*737, and OR*3.0*626) match the checksums 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 the option Calculate and Show Checksum Values [XTSUMBLD-CHECK] from for all patches (see Routine Installation Verification section 4.8.1.).

Data Dictionary:

Use Fileman to confirm that the partial data dictionary updates that were installed by PSN*4.0*576:

- PGX ELIGIBLE (#46) field in the VA PRODUCT (#50.68) file
- PGX SUPPRESSED (#47) field in the VA PRODUCT (#50.68) file
- PGX ELIGIBLE (#5) field in the DRUG INGREDIENTS (#50.416) file
- PGX SUPPRESSED (#6) field in the DRUG INGREDIENTS (#50.416) file

AND that the following data dictionary updates that were installed by PSS*1.0*262:

- PHARMACOGENOMIC GENES (#51.26) **-** NEW
- PHARMACOGENOMIC PHENOTYPES (#51.28) - NEW
- PHARMACOGENOMIC EMAIL LOG (#51.29) – NEW
- VA PHARMACOGENOMICS URL (#103) field in the PHARMACY SYSTEM (#59.7) file - PARTIAL

no longer exist. These data dictionary restorations may be verified using the Fileman option LIST FILE ATTRIBUTES in the DATA DICTIONARY UTILITY menu (see Data Dictionary Verification starting in section 4.8.2).

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.