VistA Immunization Enhancements Increment 4.0

VIMM Patch PX*1.0*216

Installation Guide

October 2016

Version 1.1

Revision History

Date	Version	Description	Author
10/31/2016	1.1	Updated cover page with the appropriate version number	Seema Chaudhry
10/19/2016	1.1	Updated cover page and the footer with the month and the patch 216 version.	Seema Chaudhry
09/2016	1.1	Revised version	Berry Anderson (Mantech)
08/2016	1.0	Initial version	Berry Anderson (Mantech)

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1.0 Description of Program

The Veterans Health Information Systems and Technology Architecture (VistA) Immunizations Enhancements (VIMM) 2.0 project modifies existing Immunization and Skin Test files and adds additional files to enable VA to quickly and reliably document and exchange standardized skin test and immunization information on beneficiaries across services and departments.

Additionally, modifications support VistA Evolution requirements.

This provides a Veteran patient-centric immunization record exchangeable with the external community. Clinicians will have access to a more complete medical history in the VistA electronic medical record resulting in improved health status as well as public health monitoring.

2.0 Goal of VIMM 2.0

The Veterans Health Information Systems and Technology Architecture (VistA) Immunizations Enhancements (VIMM) 2.0 project, Increment 4, builds upon the file structures and standardized data introduced in Increments 1, 2, and 3 by adding functional enhancements to the existing VistA Patient Care Encounter (PCE) package.

3.0 New Features in Patch PX*1.0*216

This patch provides the following new features:

1. Introduces a new file, V IMMUNIZATION DELETED (#9000080.11) that will contain entries that were deleted out of the V IMMUNIZATION file (#9000010.11). Immediately prior to deleting an entry from the V IMMUNIZATION file, a copy of the record will be made and filed to the V IMMUNIZATION DELETED file. The date/time of deletion and the user that deleted the record will be recorded.

2. Creates Remote Procedure Calls (RPCs) for use by the Enterprise Health Management Platform (eHMP) project, the Computerized Patient Record System (CPRS) software and others. These RPCs retrieve skin test information from the following files:

    - V SKIN TEST (#9000010.12)

    - SKIN TEST (#9999999.28)

    - IMM ADMINISTRATION SITE (BODY) (#920.3)

3. Creates a RPC to retrieve immunization data from the V IMMUNIZATION (#9000010.11) file. This data will be used in the future to retrieve patient immunization data and transmit it, using the Health Level 7 (HL7) standard protocol, to external agencies (e.g., State Immunization Information Registries). As part of this effort, a new option will be introduced with this patch, Accounting of Immunization Disclosures Report [PXV IMM DISCLOSURE REPORT] that can be run from the PCE Coordinator Menu [PX PCE COORDINATOR MENU]. This option can be used

to generate a list of immunization records transmitted to external agencies. This option allows for a date range selection as well as one, multiple or all agencies and one, multiple or all patients.

4. Previously, auditing has been turned on for all fields of the V IMMUNIZATION (#9000010.11) file. Additional safe guards are added to ensure auditing is not turned off, and that the data audits cannot be purged for the V IMMUNIZATION file.

5. The existing immunization inventory functionality is updated to include multi-divisional features:

> - Inventory items may be linked to an associated facility
>
> - Inventory reports are facility specific

6. The immunization entry process is updated to require the entry of Dose, Dose Units, Route of Administration and Site of Administration.

(Note: If route is ORAL, site is not required.)

7. The PX SAVE DATA remote procedure call (RPC) has been modified to provide support for the following fields in the V SKIN TEST file (#9000010.12):

> - READER (#.07)
>
> - ORDERING PROVIDER (#1202)
>
> - ANATOMIC LOCATION OF PLACEMENT (#1212)
>
> - READING COMMENTS (#1301)

8. The functionality for the Health Summary component PCE IMMUNIZATIONS (IM) is modified to ignore time and occurrence limits, restoring pre-patch PX*1.0*210 behavior.

9. Provides an alert whenever specific allergy-type contraindications are recorded as a reason for not giving an immunization in the V IMM CONTRA/REFUSAL EVENTS file (#9000010.707). The alert text reads: "You have recorded an allergy/adverse reaction contraindication reason. This information should also be recorded in the Adverse Reaction Tracking package if it is not already present there."

APIs Associated:

API	New/Modified/Deleted
VSKIN^PXPXRM (ICR #4250)	Modified

Files & Fields Associated:

File Name (Number)	Field Name (Number)	New/Modified/Deleted
IMM EXTERNAL AGENCY (#920.71)		
AGENCY NAME (#.01)	New	
V IMMUNIZATION (#9000010.11)		
	IMMUNIZATION (#.01)	Modified
	EVENT DATE AND TIME	

(#1201)		Modified
DATE/TIME RECORDED		
(#1205)		Modified
TIMESTAMP (#1221)		New
EVENT INFORMATION		
SOURCE (#1301)		Modified
DISCLOSED TO (multiple		
(field #820, sub-file		
#9000010.1182)		New
AGENCY (#.01) of the		
DISCLOSED TO sub-file		
(#9000010.1182)		New
DISCLOSURE DATE/TIME		
(#.02) of the		
DISCLOSED TO sub-file		
(#9000010.1182)		New

IMMUNIZATION LOT (#9999999.41)

LOT NUMBER (#.01)		Modified
MANUFACTURER (#.02)		Modified
VACCINE (#.04)		Modified
ASSOCIATED VA FACILITY (#.1)		New

V IMMUNIZATION DELETED (#9000080.11)

IMMUNIZATION (#.01)		New
PATIENT NAME (#.02)		New
VISIT (#.03)		New
SERIES (#.04)		New
LOT (#.05)		New
REACTION (#.06)		New
CONTRAINDICATED (#.07)		New
DOSE OVERRIDE (#.08)		New
INJECTION SITE (#.09)		New
VOLUME (#.11)		New
DATE OF VAC INFO STATEMENT		New
(#.12)		
CREATED BY V CPT ENTRY (#.13)		New
VAC ELIGIBILITY (#.14)		New
IMPORT FROM OUTSIDE REGISTRY		

(#.15)	New
NDC (#.16)	New
ADMINISTRATIVE NOTES (#1)	New
VIS OFFERED/GIVEN TO PATIENT (multiple field #2, sub-file #9000080.112)	New
VIS OFFERED/GIVEN TO PATIENT (#.01) of the VIS OFFERED/GIVEN TO PATIENT sub-file (#9000080.112)	New
DATE VIS OFFERED/GIVEN (#.02) of the VIS OFFERED/GIVEN TO PATIENT sub-file (#9000080.112)	New
OTHER DIAGNOSIS (multiple field #3, sub-file #9000080.113)	New
OTHER DIAGNOSIS (#.01) of the OTHER DIAGNOSIS sub-file (#9000080.113)	New
REMARKS (#1101)	New
EVENT DATE AND TIME (#1201)	New
ORDERING PROVIDER (#1202)	New
CLINIC (#1203)	New
ENCOUNTER PROVIDER (#1204)	New
DATE/TIME RECORDED (#1205)	New
IMMUNIZATION DOCUMENTER (#1206)	New
LOT NUMBER (#1207)	New
PARENT (#1208)	New
EXTERNAL KEY (#1209)	New
OUTSIDE PROVIDER NAME (#1210)	New
ANCILLARY POV (#1213)	New
USER LAST UPDATE (#1214)	New
ORDERING LOCATION (#1215)	New
DATE/TIME ENTERED (#1216)	New
ENTERED BY (#1217)	New
DATE/TIME LAST MODIFIED (#1218)	New
LAST MODIFIED BY (#1219)	New

WARNING ACKNOWLEDGED (#1220)	New
EVENT INFORMATION SOURCE (#1301)	New
ROUTE OF ADMINISTRATION (#1302)	New
SITE OF ADMINISTRATION (BODY) (#1303)	New
PRIMARY DIAGNOSIS (#1304)	New
DOSE (#1312)	New
DOSAGE (#1312.5)	New
DOSE UNITS (#1313)	New
SNOMED CT (multiple field #2601, sub-file #9000080.1126)	New
SNOMED CT (#.01) of the SNOMED CT sub-file (#9000080.1126)	New
SNOMED PREFERRED TERM (#.019) of the SNOMED CT sub-file (#9000080.1126)	New
LOINC CODES (multiple field #2701, sub-file #9000080.1127)	New
LOINC CODES (#.01) of the LOINC CODES sub-file (#9000080.1127)	New
LOINC TEXT (#.019) of the LOINC CODES sub-file (#9000080.1127)	New
RESULTS (#1401)	New
READING (#1402)	New
DATE/TIME READ (#1403)	New
READER (#1404)	New
READING RECORDED (#1405)	New
HOURS READ POST-INOCULATION (#1406)	New
READING COMMENT (#1501)	New
WARNING OVERRIDE REASON (#1601)	New
EDITED FLAG (#80101)	New
AUDIT TRAIL (#80102)	New
COMMENTS (#81101)	New
VERIFIED (#81201)	New
PACKAGE (#81202)	New

DATA SOURCE (#81203)		New
DISCLOSED TO (multiple (field #820, sub-file #9000080.1182)		New
AGENCY (#.01) of the DISCLOSED TO sub-file (#9000080.1182)		New
DISCLOSURE DATE/TIME (#.02) of the DISCLOSED TO sub-file (#9000080.1182)		New
DELETED BY (#88001)		New
DATE/TIME DELETED (#88002)		New

Options Associated:

Option Name	Type	New/Modified/Deleted
PXV IMM DISCLOSURE REPORT	Run Routine	New

Parameters Associated:

Parameter Definition Name	New/Modified/Deleted
PXV SK DAYS BACK	New

RPCs Associated:

RPC	New/Modified/Deleted
PXVIMM ICR LIST	Modified
PXVIMM IMM DETAILED	Modified
PXVIMM IMM DISCLOSURE	New
PXVIMM VIMM DATA	New
PXVSK DEF SITES	New
PXVSK SKIN SHORT LIST	New
PXVSK V SKIN TEST LIST	New
PX SAVE DATA	Modified

4.0 Test Sites

- Cleveland, OH

- St Louis, MO

- San Antonio, TX

5.0 Documentation Retrieval Instructions (VIMM Patch PX*1.0*216)

The software documentation is being released as a host file and/or 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:

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

Title	File Name	FTP Mode
Patient Care Encounter (PCE) V. 1.0 User Manual	PX_1_UM_R0816.PDF	(binary)
Patient Care Encounter (PCE) V.1.0 Technical Manual	PX_1_TM_R0816.PDF	(binary)

Documentation can also be found on the VA Software Documentation Library at: http://www4.va.gov/vdl/ after national release.

6.0 Patch Installation (VIMM Patch PX*1.0*216)

Associated patches:

Patch PX*1.0*197 must be installed BEFORE PX*1.0*216

Patch PSN*4.0*448 must be installed BEFORE PX*1.0*216

Patch PX*1.0*215 must be installed BEFORE PX*1.0*216

6.1 Pre/Post Installation Overview

The pre-installation process deletes the trigger cross-reference from the EVENT DATE AND TIME (#1201) field of the V IMMUNIZATION (#9000010.11) file. The trigger will be moved to the IMMUNIZATION (#.01) field. The trigger sets the DATE/TIME RECORDED (#1205) field.

The post-installation process sets a node in the V IMMUNIZATION data dictionary (DD) that prevents a user from being able to purge data audits for the V IMMUNIZATION file.

6.2 Pre-Installation Instructions

Patch PX*1.0*197 must be installed BEFORE PX*1.0*216

Patch PSN*4.0*448 must be installed BEFORE PX*1.0*216

Patch PX*1.0*215 must be installed BEFORE PX*1.0*216

6.3 Post-Installation Instructions

N/A

6.4 Rollback Instructions

In the event a rollback is needed, the site should log a CA SDM (Service Desk Manager) ticket. The site must work closely with the development team to back out the patch, as it requires restoring data dictionaries (DDs).

Refer to the VIMM 2.0 Increment 4 Recovery Procedures document for more information.

Located at this link: Increment 4 Recovery Procedures

7.0 Installation Instructions for dependent/associated patch

WARNING: Associated patch must be installed in the proper order
The following patches must be installed in this order

1. Patch PSN*4.0*448   Additional NDC/UPN APIS
2. Patch PX*1.0*215   VIMM 2.0 patch
3. Patch PX*1.0*216   VIMM 2.0 patch

The installation instructions for the dependent patches has been included in the Installation Guide for VIMM Patch PX*1.0*215.

8.0 Installation Instructions for PX*1.0*216

WARNING: Associated patch must be installed in the proper order

The following patches must be installed in this order:

1. Patch PSN*4.0*448   Additional NDC/UPN APIS

2. Patch PX*1.0*215   VIMM 2.0 patch

3. Patch PX*1.0*216   VIMM 2.0 patch

This patch should be installed during a period of minimal system activity, preferably with users off the system. Installation time is expected to be approximately 10 minutes.

9.0 Step-by-Step Instructions for PX*1.0*216

This patch should be installed during a period of minimal system activity, preferably with users off the system. Installation time is expected to be less than 10 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 # (PX*1.0*216):

    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 (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.
    d. Print Transport Global – This option will allow you to view the components of the KIDS build.

4. From the Installation Menu, select the Install Package(s) option and choose the patch to install. Enter PX*1.0*216.

5. When prompted 'Want KIDS to Rebuild Menu Trees Upon Completion of

    Install? YES//'
    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.

10.0 Post-Installation Instructions / Routine Information for PX*1.0*216

10.1 Post-Installation Instructions

N/A

10.2 Routine Information

The second line of each of these routines now looks like:

> ;;1.0;PCE PATIENT CARE ENCOUNTER;**[Patch List]**;Aug 12, 1996;Build 7

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

Routine Name: PXAPIDEL

> Before: B56745766   After: B57912132 **1,9,22,130,168,197,216**

Routine Name: PXCEVFI1

> Before: B33198888   After: B71666657 **23,73,112,136,143,124,184,
> 185,210,215,216**

Routine Name: PXKFIMM

> Before: B5142444   After: B5574555 **22,124,201,209,210,215,216**

Routine Name: PXKMAIN

> Before: B55424847   After: B56711884 **22,59,73,88,69,117,130,124,
> 174,164,210,215,216**

Routine Name: PXKMAIN1

> Before: B41644781   After: B56560479 **22,73,124,178,210,216**

Routine Name: PXPXRM

> Before: B125590932   After: B156738878 **119,199,210,215,216**

Routine Name: PXRHS03

> Before: B56157465   After: B59630785 **13,210,216**

Routine Name: PXRPC

> Before: B156917264   After: B167038742 **200,209,210,215,216**

Routine Name: PXVDIS

     Before: n/a   After: B48092848 **216**

Routine Name: PXVEDIT

     Before: B3872063   After: B16872011 **210,216**

Routine Name: PXVINV

     Before: B25607408   After: B28479638 **210,216**

Routine Name: PXVP216

     Before: n/a   After: B1234583 **216**

Routine Name: PXVRPC1

     Before: B70359613   After: B78134304 **215,216**

Routine Name: PXVRPC4

     Before: B131321819   After: B138502412 **215,216**

Routine Name: PXVRPC5

     Before: B35105697   After: B35949423 **215,216**

Routine Name: PXVRPC7

     Before: n/a   After: B131688794 **216**

Routine Name: PXVRPC7A

     Before: n/a   After: B60762590 **216**

Routine Name: PXVRPC8

     Before: n/a   After: B 30970984 **216**

Routine Name: PXVRPC9

     Before: n/a   After: B 7189011 **216**

Routine Name: PXVUTIL

     Before: B13284181   After: B20844823 **201,210,215,216**

Routine Name: PXVXR

     Before: B13167191   After: B25661841 **210,216**

Routine Name: PXVZRT

     Before: B82546869   After: B84727294 **206,215,216**

Routine list of preceding patches: 197, 215