Pneumococcal Reminders and Women's Health Taxonomy update

PXRM*2.0*36

INSTALLATION and SETUP GUIDE

February 2014

Product Development
Department of Veterans Affairs

Contents

Introduction

Description:

Pneumococcal vaccine-naïve persons. ACIP recommends that adults aged >=19 years with immunocompromising conditions, functional or anatomic asplenia, CSF leaks, or cochlear implants, and who have not previously received PCV13 or PPSV23, should receive a dose of PCV13 first, followed by a dose of PPSV23 at least 8 weeks later (Table). Subsequent doses of PPSV23 should follow current PPSV23 recommendations for adults at high risk. Specifically, a second PPSV23 dose is recommended 5 years after the first PPSV23 dose for persons aged 19-64 years with functional or anatomic asplenia and for persons with immunocompromising conditions. Additionally, those who received PPSV23 before age 65 years for any indication should receive another dose of the vaccine at age 65 years, or later if at least 5 years have elapsed since their previous PPSV23 dose.

Previous vaccination with PPSV23. Adults aged >=19 years with immunocompromising conditions, functional or anatomic asplenia, CSF leaks, or cochlear implants, who previously have received >=1 doses of PPSV23 should be given a PCV13 dose >=1 year after the last PPSV23 dose was received. For those who require additional doses of PPSV23, the first such dose should be given no sooner than 8 weeks after PCV13 and at least 5 years after the most recent dose of PPSV23.

This patch does the following during installation:
1. Installation Routine:

    Rename PNEUMOVAX to PNEUMOVAX POLYSACCHARIDE PPSV23 (does not change the short name that displays in CPRS or on Health Summary).

    Rename the reminder term VA-HIGH RISK FOR PNEUMOCOCCAL DZ to VA-PNEUMOC DZ RISK – HIGH

2. Reminders:
    LONG TERM STEROID USE (LOCAL)
    VA-BL PNEUMOC RISK IMMUNOCOMPROMISED
    VA-PNEUMOCOCCAL IMMUNIZATION PPSV23
    VA-PNEUMOCOCCAL IMMUNIZATION PCV13
    VA-MHV PNEUMOVAX
    VA-BL PNEUMOC RECENT CHEMO/IMMUNOSUPPRESSION
    VA-OB PNEUMOCOCCAL PRIOR VACCINATIONS

VA-OB PNEUMOCOCCAL PPSV23 INDICATIONS
VA-OB ZOSTER VACCINE DATE
VA-OB PNEUMOCOCCAL PCV13 INDICATIONS

3. Dialogs
VA-PNEUMOCOCCAL IMMUNIZATION PPSV23 PNEUMOVAX
VA-PNEUMOCOCCAL IMMUNIZATION PCV13 PREVNAR

4. Taxonomies
VA-PNEUMOC DZ RISK - HIGHEST/NOT IMMUNO COMP
VA-PNEUMOC DZ RISK - IMMUNOCOMPROMISED
VA-PNEUMOC DZ RISK - HIGH
VA-PNEUMOC DZ RISK - CHEMOTHERAPY (includes drug classes and drugs)

VA-CERVICAL CA/ABNORMAL PAP
VA-MASTECTOMY
VA-CERVICAL CANCER SCREEN
VA-WH HYSTERECTOMY W/CERVIX REMOVED
VA-WH PAP SMEAR SCREEN CODES

5. Immunization: PNEUMOCOCCAL CONJUGATE PCV13
No mnemonic is being sent out

6. Terms
STEROIDS - PNEUMOCOCCAL DZ RISK   (LOCAL)
VA-PNEUMOC DZ RISK - CHEMO/IMMUNOSUPP DRUGS
VA-PNEUMOC DZ RISK - CHEMOTHERAPY
VA-PNEUMOC DZ RISK - HIGH
VA-PNEUMOC DZ RISK - HIGHEST/NOT IMMUNO COMP
VA-PNEUMOC DZ RISK - IMMUNOCOMPROMISED
VA-PNEUMOC DZ RISK - LONG TERM STEROIDS
VA-PNEUMOC PCV13 CONTRAINDICATION
VA-PNEUMOC PCV13 DEFERRALS
VA-PNEUMOC PCV13 DX INCORRECT
VA-PNEUMOC PCV13 IMMUNIZATION
VA-PNEUMOC PCV13 ORDER SUPPRESSION
VA-PNEUMOC PCV13 ORDERS
VA-PNEUMOC PPSV23 CONTRAINDICATIONS
VA-PNEUMOC PPSV23 DEFERRALS
VA-PNEUMOC PPSV23 IMMUNIZATION
VA-PNEUMOC PPSV23 INCORRECT DIAGNOSIS
VA-PNEUMOC PPSV23 ORDER SUPPRESSION
VA-PNEUMOC PPSV23 ORDERS

How the reminders work:
1. Only see one reminder at a time – never both
2. Counts the number of PPSV23 doses given either by counting doses recorded or looking for a 'SERIES' marked as booster, 2, 3 or 4.
3. If the PCV13 immunization is needed, then the PPSV23 is NA.
4. If PCV13 is given, contraindicated or not indicated, then the PPSV23 reminder is applicable unless
   a. PCV13 was given in the past 8 weeks or
   b. The patient has already received PPSV23 and is not yet due again, or
   c. Has a contraindication/allergy recorded.
5. The PPSV23 reminder takes into account:
   a. Diagnoses that would require a 2nd dose after 5 years
   b. Age so that a dose is given after age 65
6. If PPSV23 has been given in the past year and the patient should get PCV13, the PCV13 reminder will not come due until one year after the most recent PPSV23
7. Logic for PPSV23:

   Taxonomies that are used in the logic:
   - IC: immunocompromised (HIV, renal failure, nephrotic syndrome, splenic dysfx, etc.
   - Highest Risk= HstR: cochlear implant, CSF leak
   - High Risk=HR - Other Diagnoses: (cardiac, pulmonary, smoking, liver disease)
   - Chemo=CH : taxonomy and drugs
   - LTS=Long term steroids

   Included in the COHORT if:
   1. (IC or HstR or CH or LTS) and either already got PCV13 but not in the past 8 weeks or has contraindication to PCV13
   2. Other dx or age>64 and not IC/HstR/CH/LTS or has contraindication to PCV13

   Baseline frequencies
   ```
   1.      >65           99Y
   2.      IC             5Y
   3.      HstR          99Y
   4.      HR            99Y
   5.      LTS            5Y
   6.      CH             5Y
   ```

   ```
   Function Findings 1,2,3,8                        Frequency  Rank
   1    <age 65 and 2 or more doses*:                 99Y       1
   2    >age 64 and 1 dose after age 64:              99Y       1
   3    no dose >64, IC/CH/LTS and no 2nd dose         5Y       2
   8    >age 64, IC/CH/LTS, has PCV13, no dose>64      5Y       2
   ```

   *2 doses are counted only if given more than 1460 days apart (4Y) or one

---

is marked as a booster dose.

For IC/CH/LTS: FF 1,2,3,8

FF3 above can be explained this way - Patient is IC and has had a dose before age 65, needs a second dose 5 years later. FF(3) is true and the reminder is due 5Y after the recorded dose.

If that second dose is given, then FF(1) takes over and the reminder is resolved (99Y).

If the patient turns 65, then FF(8) is true and the reminder is due again 5Y after the last dose. Once that dose after age 65 is given, then FF(2) takes over and the reminder is resolved (99Y).

```
Function Findings 2,4,6                        Frequency  Rank
  2    >age 64 and 1 dose after age 64:          99Y      1
  4    >age 64,dosed <65, no dose>64, not IC/CH    5Y      2
  6    (HR or Other dx) not IC/CH and <age 65:    99Y      3
```

For not IC/CH/LTS: FF 6,4
Baseline dose due for HR and HstR, FF6 sets for patients <age 65 who are not IC/CH/LTS. Once they turn 65, then FF4 is applicable and the reminder is due 5 years after the prior dose. Once a dose is given after age 65, then FF2 is applicable and any dose after age 65 will resolve.

Resolution: PPSV23 or deferral or an order

Function Findings 5, 7, 10, 16, 17, 18, 19, 20

FF5 provides a message about the need for an additional dose after age 65 if the patient's most recent dose was prior to age 65 for non-IC/CH/LTS patients.

FF7 provides a message about the need for an additional dose after age 65 for IC/CH/LTS patients who have already gotten PCV13.

FF10 assesses the last 2 doses of pneumococcal vaccine to be sure that they were more than 4 years apart

FF16, 17, 18 and 19 look at finding 16 and evaluate to see if it is an ICD code, an outpatient drug or a non-intravitreal administration of a chemotherapy drug.

FF20 provides a message if PCV13 is needed. This is just in case someone
looks at this reminder to see why it is NOT due.

Long Term steroids is set up in a local reminder term and a local reminder in order to
allow sites to modify this option. This was done since there is not a clear consensus on
how to best identify these patients or to define long term steroid use and pharmacy
practices in how the day's supply is recorded may vary.

Map local dosage formulations to the reminder term: STEROIDS -
PNEUMOCOCCAL DZ RISK (see post install instructions).

Once those are mapped, a reminder LONG TERM STEROID USE evaluates the
recent fills of steroid to identify patients with long term use. This reminder defines long
term use as:
a. any fill that is marked with a day's supply of >70 days
b. or 3 recent fills each with a day's supply of >21 days.

The CDC Guidance on the amount of steroid use that causes a level of
immunosuppression sufficient to warrant pneumococcal immunization is two weeks on
every-day dosing of corticosteroids of at least 20 mg/day or 2 mg/kg/day. However, higher
thresholds were chosen for these reminders because there were many false positives
included in the reminder cohort logic when looking for shorter durations or fewer fills.
Patients who received one or 2 recent tapers of steroids that were of short duration (7-14
days) were identified and included incorrectly in the cohort if only one fill was used
because even though the patient got only a limited duration of steroid, the day's supply
was marked as 30 days.

Local sites can modify this reminder or map some other entry to the term that is
used in the pneumococcal reminder logic if needed. This reminder is used in the term:
VA-PNEUMOC DZ RISK - LONG TERM STEROIDS.

Pre-Installation

*Required Software for PXRM*2*36*

Package/Patch	Namespace	Version	Comments
Clinical Reminders	PXRM	2.0	Fully patched
Health Summary	GMTS	2.7	Fully patched
Kernel	XU	8.0	Fully patched
NATIONAL DRUG FILE	PSN	4.0	Fully patched
Pharmacy Data Management	PSS	1.0	Fully patched
Outpatient Pharmacy	PSO	7.0	Fully patched
VA FileMan	DI	22	Fully patched

Related Documentation

Documentation	Documentation File name
Installation and Setup Guide	PXRM_2_0_36_IG.PDF

Web Sites

Site	URL	Description
National Clinical Reminders site	http://vista.med.va.gov/reminders	Contains manuals, PowerPoint presentations, and other information about Clinical Reminders
National Clinical Reminders Committee	http://vaww.portal.va.gov/sites/ncrc public/default.aspx	This committee directs the development of new and revised national reminders
VistA Document Library	http://www.va.gov/vdl/	Contains manuals for Clinical Reminders and

1. Rename any local health factors to prevent duplicates
These are the names of the HFs being exported with this patch

PNEUMOCOCCAL PCV13 DX INCORRECT
PNEUMOCOCCAL PCV13 VACCINE CONTRAIND
PNEUMOCOCCAL PCV13 VACCINE PRECAUTION
REFUSED PNEUMOC VACCINE PCV13
PNEUMOCOCCAL PPSV23 DX INCORRECT
PNEUMOCOCCAL PPSV23 VACCINE CONTRAIND
PNEUMOCOCCAL PPSV23 VACCINE PRECAUTION
REFUSED PNEUMOC VACCINE PPSV23

Installation

This patch can be installed with users on the system, but it should be done during non-peak hours. Estimated Installation Time: 10-15 minutes

The installation needs to be done by a person with DUZ(0) set to "@."

NOTE: We recommend that a Clinical Reminders Manager or CAC be present during the install, so that if questions occur during the install of Reminder Exchange entries, a knowledgeable person can respond to them.

1. **Retrieve the host file from one of the following locations (with the ASCII file type):**

Albany	ftp.fo-albany.med.va.gov	<ftp://ftp.fo-albany.med.va.gov>
Hines	ftp.fo-hines.med.va.gov	<ftp://ftp.fo-hines.med.va.gov>
Salt Lake City	ftp.fo-slc.med.va.gov	<ftp://ftp.fo-slc.med.va.gov>

2. **Install the patch first in a training or test account.**
   Installing in a non-production environment will give you time to get familiar with new functionality and complete the setup for reminders and dialogs prior to installing the software in production.

3. **Load the distribution.**
   In programmer mode type, D ^XUP, select the Kernel Installation & Distribution System menu (XPD MAIN), then the Installation option, and then the option LOAD a Distribution. Enter your directory name.KID at the Host File prompt.

Example

```
Select Installation <TEST ACCOUNT> Option: 1  Load a Distribution
Enter a Host File:

KIDS Distribution saved on Oct 01, 2013@13:29:56
Comment: Pneumoccocal vaccine update

Loading Distribution...

Build PXRM*2.0*36 has an Environmental Check Routine
Want to RUN the Environment Check Routine? YES// YES
   PXRM*2.0*36
Will first run the Environment Check Routine, PXRMP36I

The environment check was successful, this build can be installed.
Use INSTALL NAME: PXRM*2.0*36 to install this Distribution.
```

From the Installation menu, you may elect to use the following options:

4. **Backup a Transport Global**
   This option will create a backup message of any routines exported with the patch. It will NOT back up any other changes such as DDs or templates.

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

5. **Install the build.**
   From the Installation menu on the Kernel Installation and Distribution System (KIDS) menu, run the option Install Package(s). Select the build PXRM*2.0*36 and proceed with the install. If you have problems with the installation, log a Remedy ticket and/or call the National Help Desk to report the problem.

```
Select Installation & Distribution System Option: Installation
Select Installation Option: INSTALL PACKAGE(S)
Select INSTALL NAME: PXRM*2.0*36
```

Answer "NO" to the following prompt:

   Want KIDS to INHIBIT LOGONs during install? NO// **NO**

NOTE: DO NOT QUEUE THE INSTALLATION, because this installation asks questions requiring responses and queuing will stop the installation. A Reminders Manager or CAC should be present to respond to these.

   Installation Example
   See Appendix A.

6. **Install File Print**
   Use the KIDS Install File Print option to print out the results of the installation process. You can select the multi-package build or any of the individual builds included in the multi-package build.

```
Select Utilities Option: Install File Print
Select INSTALL NAME: PXRM*2.0*36
```

7. Build File Print
Use the KIDS Build File Print option to print out the build components.

```
Select Utilities Option:  Build File Print
Select BUILD NAME: PXRM*2.0*36
DEVICE: HOME//
```

8. Post-installation routines

After successful installation, the following init routines may be deleted:

PXRMP36E
PXRMP36I

Post-Install Set-up Instructions

1. Mapping drug dose findings for steroids
   Map to this term: STEROIDS - PNEUMOCOCCAL DZ RISK

Description:
  Include any drug/dose that indicates a high enough steroid dose that when
  given over a period of weeks/months would cause immunosuppression to a
  degree that put the patient at risk for pneumococcal disease.

  Example: to include steroids at a dose equivalent to 5mg of prednisone,
  include at least the following.

  DR.PREDNISONE 10MG TAB   DR.PREDNISONE 20MG TAB
  DR.PREDNISONE 50MG TAB   DR.DEXAMETHASONE 2MG TAB
  DR.DEXAMETHASONE 4MG TAB   DR.DEXAMETHASONE 1MG TAB
  DR.DEXAMETHASONE 1.5MG TAB   DR.DEXAMETHASONE 0.75MG TAB
  DR.PREDNISONE 5MG TAB

2. Map your local pneumovax PPSV23 immunization types to:
    VA-PNEUMOC PPSV23 IMMUNIZATION

3. Map your local orderable items for immunizations if you want the active/pending order to resolve the
   reminder: (optional)

       VA-PNEUMOC PCV13 ORDERS
       VA-PNEUMOC PPSV23 ORDERS

4. Map any CURRENT SMOKER health factors to:
   VA-PNEUMOC DZ RISK – HIGH
   Add a begin date to these health factors so that the reminder looks back only a moderate amount of
   time for an entry. E.g. T-1Y

5. Map immunizations for Zoster to the term:
   VA-ZOSTER IMMUNIZATION
   Set BEGINNING DATE/TIME to T-28D

6. Consider mapping the lab test eGFR into the reminder term VA-PNEUMOC DZ RISK -
   IMMUNOCOMPROMISED.
   A condition should be set on this lab test. The VHA Clinical Guidance Statement includes those with
   Chronic Kidney Disease (CKD) of stages III-V in this cohort. We recommend that an eGFR of <40
   rather than <60 be used since transient decreases of eGFR <60 may occur with acute illness or use of
   contrast dye and not be indicative actual CKD stage III or higher. To look at the most recent entry for
   a value of <40:
   I +V<40!(V["<")&'(V=">60")
   Do NOT set the field USE STATUS/COND IN SEARCH to YES.

7. The order option in the dialog can be suppressed for specific user classes or for everyone using the reminder terms:
VA-PNEUMOC PCV13 ORDER SUPPRESSION
VA-PNEUMOC PPSV23 ORDER SUPPRESSION

> VA-ASU USER CLASS
> Enter the user class that should NOT see the option to order the pneumococcal vaccines.
> If more than one user class is needed, add additional findings of the CF VA-ASU USER CLASS for each one as needed.
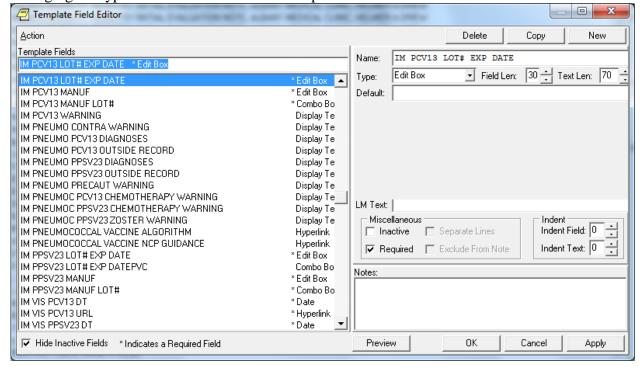>
> VA-AGE
> To suppress the order from being seen by ANYONE, change the < sign to a > sign in the CF for patient age.

8. If the order option is available, please attach an order dialog or an order menu to the finding items.
   ```
   OI PNEUMOC PCV13 OUTPT SHORT
   OI PNEUMOC PPSV23 OUTPT
   ```
9. 2 Template fields are used for Lot #s and expiration dates. They are exported as EDIT BOXES, for free text entry. Sites may choose to change the TYPE to a COMBO box and then populate the template fields with local lot #s and expiration dates.

> IM PCV13 LOT# EXP DATE
> IM PPSV23 LOT# EXP DATE

Changing the type is done in CPRS under Template Editor on the Notes Tab.

Appendix A: Installation Example

Select Installation <TEST ACCOUNT> Option: 6 Install Package(s)

Select INSTALL NAME: pxrm*2.0*36   11/15/13@08:50:05

  => Pneumoccocal vaccine update ;Created on Nov 14, 2013@14:24:03

This Distribution was loaded on Nov 15, 2013@08:50:05 with header of

  Pneumoccocal vaccine update ;Created on Nov 14, 2013@14:24:03

  It consisted of the following Install(s):

   PXRM*2.0*36

Checking Install for Package PXRM*2.0*36

Will first run the Environment Check Routine, PXRMP36I

The environment check was successful, this build can be installed.

Install Questions for PXRM*2.0*36

Incoming Files:

  811.8   REMINDER EXCHANGE (including data)

Note: You already have the 'REMINDER EXCHANGE' File.

I will OVERWRITE your data with mine.

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//   TELNET PORT

Install Started for PXRM*2.0*36 :

        Nov 15, 2013@08:51:31

 Build Distribution Date: Nov 14, 2013

  Installing Routines:

        Nov 15, 2013@08:51:31

  Running Pre-Install Routine: PRE^PXRMP36I

  DISABLE options.

  DISABLE protocols.

  Checking for entries that need renamed.

  Installing Data Dictionaries:

        Nov 15, 2013@08:51:31

  Installing Data:

        Nov 15, 2013@08:51:32

  Running Post-Install Routine: POST^PXRMP36I

  ENABLE options.

  ENABLE protocols.

There are 3 Reminder Exchange entries to be installed.

1. Installing Reminder Exchange entry VA-PNEUMOCOCCAL REMINDERS

2. Installing Reminder Exchange entry PATCH 36 WH TAXONOMIES (5)

3. Installing Reminder Exchange entry VA-PATCH 36 POST COMPONENTS

  Updating Routine file...

  Updating KIDS files...

  PXRM*2.0*36 Installed.

        Nov 15, 2013@08:52:33

  Not a production UCI

                PXRM*2.0*36

Install Completed

Acronyms

The OIT Master Glossary is available at
http://vaww.oed.wss.va.gov/process/Library/master_glossary/masterglossary.htm

Term	Definition
ASU	Authorization/Subscription Utility
Clin4	National Customer Support team that supports Clinical Reminders
CPRS	Computerized Patient Record System
DBA	Database Administration
DG	Registration and Enrollment Package namespace
ESM	Enterprise Systems Management (ESM)
FIM	Functional Independence Measure
GMTS	Health Summary namespace (also HSUM)
GUI	Graphic User Interface
HRMH/HRMHP	High Risk Mental Health Patient
IAB	Initial Assessment & Briefing
ICD-10	International Classification of Diseases, 10th Edition
ICR	Internal Control Number
IOC	Initial Operating Capabilities
LSSD	Last Service Separation Date
MH	Mental Health
MHTC	Mental Health Treatment Coordinator
OHI	Office of Health Information
OI	Office of Information
OIF/OEF	Operation Iraqi Freedom/Operation Enduring Freedom
OIT/OI&T	Office of Information Technology
OMHS	Office of Mental Health Services
ORR	Operational Readiness Review
PCS	Patient Care Services
PD	Product Development
PIMS	Patient Information Management System
PMAS	Program Management Accountability System

Term	Definition
PTM	Patch Tracker Message
PXRM	Clinical Reminder Package namespace
RSD	Requirements Specification Document
SD	Scheduling Package Namespace
SQA	Software Quality Assurance
USR	ASU package namespace
VA	Department of Veteran Affairs
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network
VistA	Veterans Health Information System and Technology Architecture