THE INDIAN HEALTH SERVICE

EHR Patch Updates
Office Hours
PXRM 1.5p1009

RPMS EHR
Electronic Health Record

What's new, What's changed

Superior Health Information Management
Now and for the Future

IHS-Office of Information Technology
EHR Program

Office Hour Presenters

- CDR Susan Pierce-Richards, ARNP, OIT EHR Project Lead
- CDR Mary Ann Niesen, PharmD, OIT Pharmacy Consultant
- Barbara Hess, DHA, OIT EHR Project analyst

Agenda

- **Introduction**
- **Presenters**
  - Office Hour Presenters have different specialties within the EHR system who will be responding to your questions
- **Questions/Answers**
  - Please do not put your phone "On Hold" during the conference call
  - "Raise your hand" through the Adobe Connect features provided
  - Please state your name/site
  - Please state your question clearly
  - Please keep background noise to a minimum to better hear the questions/answers

CONTENTS OF PATCH

Prerequisites

- This patch is NOT cumulative. You must install PXRM patch 1008 first.
- Other pre-requisites are:
  - IHS PCC Suite v1.0 p7,
  - PXRM 1.5 patch 1001
  - PXRM 1.5 patch 1004
  - PXRM 1.5 patch 1005
  - PXRM 1.5 patch 1006
  - PXRM 1.5 patch 1007
  - PIMS patch 1015
  - Radiology patch 1003
  - Lab patch 1030

Content of Patch

- VA patch: PXRM 1.5 p1009
- Clinical indexes
- IHS modifications
- Updated IHS-ZOSTER computed findings
- 2 new PAP reminders and dialogs
- Updated Colon Cancer reminder

Contents of Patch

- The goal of this patch is to create and populate a new global in the Clinical Reminders namespace, ^PXRMINDX, that is an index of clinical data.

- Each of the packages whose data Clinical Reminders uses as a finding type will be participating in this project.

- The indexes are also required for the graphing functionality in EHRp11.

Contents of Patch

=====================================

This global consumes a large amount of disk space and requires a long time to initialize the cross-references.

=====================================

- It is important to read the Global Size and Global Placement sections in the Pre-Installation section before installing this patch.
- When these patches are installed, the cross-references begin populating the ^PXRMINDX global on all new data.
- A separate initialization process populates old data.

SITE PREPARATION

Preparation for Installation

- It is imperative that the individual(s) installing the patch and/or indexing files read the patch documentation thoroughly BEFORE installing the patch.

Populate Mailman Group

1. Identify the Mailgroup used for reminder management using Fileman Inquire into File 800 (Clinical Reminder Parameters file)
2. Add your CAC and IT to the mailgroup

```
OUTPUT FROM WHAT FILE: CLINICAL REMINDER PARAMETERS//


Select CLINICAL REMINDER PARAMETERS ONE:    1
       ...OK? Yes//   (Yes)


ANOTHER ONE:
STANDARD CAPTIONED OUTPUT? Yes//   (Yes)
Include COMPUTED fields:  (N/Y/R/B): NO// BOTH Computed Fields and Record Number
(IEN)


NUMBER: 1                              ONE: 1
URL: http://www.ihs.gov/cio/crs/
 WEB SITE TITLE: Clinical Reporting System
DEFAULT REMINDER DISCLAIMER:   The following disease screening, immunization
and patient education recommendations are offered as guidelines to assist in
your practice.  These are only recommendations, not practice standards.  The
appropriate utilization of these for your individual patient must be based on
clinical judgment and the patient's current status.
 FULL SSN: YES
 REMINDER MANAGEMENT MAILGROUP: PXRM ERRORS <<<<<<< Mail group
 MAXIMUM NUMBER OF INDEX ERRORS: 200
```

Calculate Size of the Global

PXRM 1.5 p1006 delivered a utility that will estimate the size of the global that is created when the files are indexed

From the Programmer Prompt

EHR> *D ESTTASK^PXRMISE*

Calculate Size of Global

This will start a taskman job that estimates the initial size of the index for each global as well as total size.

The information will be delivered in a MailMan message sent to member of the Mail group defined in File 800.

- The size estimate is given in blocks. For Caché, they are 2K blocks and for DSM they are 1K blocks.
- Most sites will be using 8k blocks. If you are using 8K blocks to store the index global, you can multiply the predicted number of blocks by the above factors to get an estimate of the number of 8K blocks that will be used.
- This database will grow over time but this will give you the size of the initial globals.

Calculate Size of Global

For reference: Tampa VAMC is a hospital with a service population of >100,000 with a hospital and 4 ambulatory clinics

- Tampa VAMC grew from 20207 to 21010 MB in three months. They have split the index global across two volume-sets (due to the current 16 MB limit for DSM), each volume set having less than a 5% growth over the 3-month period. (However, when sites convert to Caché, the limitation on the volume set size is lifted.)

Global placement

- If you have Radiology 1003, you have the global placed already.

- If not, you may use global translation or global mapping to create a volume or data set, then place the ^PXRMINDX global, according to the instructions that are appropriate to your system.

- Consider placing ^PXRMINDX in its own volume set, setting the Cache dataset based on estimated sized + room for significant growth.

Journaling - "Historical Seeding"

- During creating and building of index, disable the journaling of ^PXRMINDX.

- You may enable it after the indexes have been created but do not have to.

- You may re-create the index. IF you re-create the file while indexing, the reminders will not work, so index during off hours.

POST INSTALLATION

Index Management

New option "PXRM INDEX MANAGEMENT"

- PXRM INDEX BUILD
  - Initially populates the indexes by indexing the existing data
  - The utility can be used to restore an index should it ever become corrupted
- PXRM INDEX COUNT
  - Provides a count by year of the entries in the index
  - Allows sites to see how the data is distributed on a yearly basis

Index Management

- May build interactively or as tasked job
- May take a while – minutes to hours depending on the size – lab is the largest
  - PIMC - 15 hours to run lab index
- Should be run when there are minimal users on system

Files to Index

- Required for Enhanced Graphing and Reminders 2.0
- Lab must be indexed for Graphing to be initiated

1 - LABORATORY TEST (CH, Anatomic Path, Micro)	**8 - V EXAM**
2 – ORDER	**9 - V HEALTH FACTORS**
*** cannot index until EHRp11	**10 - V IMMUNIZATION**
3 - PHARMACY PATIENT	**11 - V PATIENT ED**
*** cannot index until EHRp11	**12 - V POV**
4 - PRESCRIPTION	**13 - V SKIN TEST**
*** cannot index until EHRp11	**14 - V MEASUREMENT**
5 - PROBLEM LIST	**15 - V PROCEDURE**
6 - RADIOLOGY	
7 - V CPT	

Indexing Files

IC   Clinical Reminders Index Build [PXRM INDEX BUILD]

Select PXRM INDEX MANAGEMENT Option: **_IB Clinical Reminders Index Build_**

Which indexes do you want to (re)build?

 1 - LABORATORY TEST (CH, Anatomic Path, Micro)

 2 - ORDER

 3 - PHARMACY PATIENT

 4 - PRESCRIPTION

 5 - PROBLEM LIST

 6 - RADIOLOGY

 7 - V CPT

 8 - V EXAM

 9 - V HEALTH FACTORS

 10 - V IMMUNIZATION

 11 - V PATIENT ED

 12 - V POV

 13 - V SKIN TEST

 14 - V MEASUREMENT

 15 - V PROCEDURE

Enter your list: (1-15): **_1_**

Do you want this to be tasked? Y// ?

Enter either 'Y' or 'N'.

Indexing Files

After indexing is completed, members of Mail group defined in File 800 will receive a mailman message similar to this:

Subj: Index for global AUPNVPED successfully built [#12184]

10/03/02@10:25 5 lines

From: POSTMASTER (Sender: DOE,JOHN) In 'IN' basket. Page 1 *New*

Build of Clinical Reminders index for global AUPNVPED completed.

Build finished at 10/03/2002@10:25:27

288 entries were created.

Elapsed time: 1 secs

0 errors were encountered.

Indexing Errors

If any entries could not be indexed, the completion message will look similar to this:

Subj: Index for global PS(55 successfully built [#12187] 10/03/02@10:30

6 lines

From: POSTMASTER (Sender: DOE,JOHN) In 'IN' basket. Page 1 *New*

Build of Clinical Reminders index for global PS(55 completed.

Build finished at 10/03/2002@10:30:07

6416 entries were created.

Elapsed time: 13 secs

136 errors were encountered.

Indexing Errors

Another MailMan message contains the information for the last "N" errors starting with most recent to oldest. "N" is set in file 800 and is defaulted to 200.

Subj: CLINICAL REMINDER INDEX BUILD ERROR(S) [#14895]
  11/19/02@11:50 136 lines
From: POSTMASTER (Sender: DOE,JOHN) In 'IN' basket. Page 1

GLOBAL: PS(55 ENTRY: DFN=1 D1=33 IV missing stop date
GLOBAL: PS(55 ENTRY: DFN=1 D1=34 IV missing stop date
GLOBAL: PS(55 ENTRY: DFN=1 D1=35 IV missing stop date
GLOBAL: PS(55 ENTRY: DFN=1 D1=36 IV missing stop date

Clean Up Recommendations

You may have some indexing errors. The most common will be inpatient orders and these can be ignored as they are not generally used for reminders.

Inpatient Pharmacy developers agree that there will be many of these.

GLOBAL: ^PS(55, ENTRY: DFN=994 D1=1545755 Unit Dose missing start date

Global ^PS(55,994,,1545755

PS(55,994,,1545755

Clean Up Recommendations

For other errors, recommend posting error message on the EHR Reminders Listserve (ensure no patient data exposed). Moderators may direct you to OIT help at that point.

UPDATED REMINDERS & DIALOGS

Reminder Changes

Retired (these will not be replaced in the update patch PXRM 2.0 P1002 later this year):

IHS-ANTICOAG CBC 2011

IHS-ANTICOAG UA 2011

IHS-ANTICOAG OCCULT BLOOD 2011

IHS-PPD 2011

IHS-PAP SMEAR 2011

New:

IHS-PAP TEST 21-29yo 2013

IHS-PAP TEST 30-64yo 2013

Updated:

IHS-COLON CANCER 2013

Dialog Changes

Retired (these will not be replaced in the update patch PXRM 2.0 P1002 later this year):

IHS-ANTICOAG CBC 2011

IHS-ANTICOAG UA 2011

IHS-ANTICOAG OCCULT BLOOD 2011

IHS-PPD 2011

IHS-PAP SMEAR 2011

New:

IHS-PAP TEST 21-29yo 2013

IHS-PAP TEST 30-64yo 2013

IHS-Colon Cancer Screen

REMINDER APPLICABLE if age 51-75

- and no history of neoplasm of the colon
- and no evidence of colonoscopy in past 9yrs 9mos
- and no evidence of sigmoidoscopy or in past 4yrs 9mos

REMINDER DUE if no Fecal test done in past year

REMINDER ON if due within 3 months

REMINDER RESOLVED

- Fecal test resulted
- Colonoscopy done (status N/A for 9yrs 3mos)
- Sigmoidoscopy (status N/A for 4yrs 9mos)

PAP for 21-29yo

==

REMINDER DUE: For female patients with intact cervix
   Ages 21-29 if no PAP test in past 3 years
REMINDER ON: 3 months before due date

==

Reference: US Preventive Services Taskforce,   American Cancer
Society Cervical Cancer Screening recommendations 2012, Healthy
People 2020 - Cancer.

==

PAP for 21-29yo

PAP for 21yo

PAP for 30-64yo

Applicable: Due every 5 years for ages 30Y to 64Y within cohort.

==

REMINDER DUE: For females aged 30-64 with intact cervix if no PAP test in past 3 years
   OR
   if no PAP test AND HPV test documented in past 5 years

*** **Reminder Frequency is set to 5 years. When PAP is performed without HPV, the PAP expires in 3 years and will show due once it has been 3 years since the PAP was performed** ***

==

Reference: US Preventive Services Taskforce,   American Cancer Society Cervical Cancer Screening recommendations 2012, Healthy People 2020 - Cancer.

==

Example:
- **Woman is 32 with intact uterus.**
- **Had PAP *only* on 2/1/2011**
- **Her Reminder will show Next Due on 2/1/2016**
- **On 2/2/2014 her PAP will "expire" and be Due Now**
(because she did not have an HPV also)

PAP for 30-64yo

PAP for 30-64yo