



RESOURCE AND PATIENT MANAGEMENT SYSTEM

Prenatal Care Module Electronic Health Record (EHR) Graphical User Interface (GUI)

(BJPN)

Installation Guide and Release Notes

Version 2.0
June 2015

Office of Information Technology (OIT)
Division of Information Technology

Table of Contents

1.0	Release Notes	1
2.0	Installation Notes	2
2.1	Contents of Distribution	2
2.2	Required Resources	2
2.2.1	RESOURCE AND PATIENT MANAGEMENT SYSTEM (RPMS).....	2
2.2.2	Required RPMS Server Software:	2
2.3	Before You Begin: Installation Issues	3
3.0	Installation Instructions	4
3.1	Disk Space	4
3.2	Pre-installation	4
4.0	Sample Installations	5
4.1	RPMS Server Install	5
4.2	Prenatal EHR setup Installation	6
4.3	Sample RPMS Server Installation.....	6
4.4	Sample GUI Client Installation.....	10
5.0	Installation Configuration	15
5.1	Post Installation RPMS Parameter Definition	15
5.1.1	BJPN DISABLE PRENATAL EDITING	15
5.1.2	BJPN POST DEDD DAYS.....	16
5.2	Post Installation Prenatal User Setup	16
	Glossary	18
	Acronym List	20
	Contact Information	21

1.0 Release Notes

Version 2.0 is the second release of the Electronic Health Record (EHR) Prenatal Care Module (PCM). The site should have already installed EHR. PCM version 2.0 includes functionality to enhance two existing prenatal modules, the Prenatal Issues and Problem List (PIP) and the Prenatal Pick List (PPL).

The intended audiences for this document are Indian Health Service (IHS) site managers and other technical staff.

2.0 Installation Notes

Prefix: BJPN

Current Version: 2.0

2.1 Contents of Distribution

Table 2-1: Contents of Distribution

File	Description
bjpn0200.k	Version 2.0 KIDS installation file
bjpn0200GUI.zip	Version 2.0 EHR Prenatal installation files in WINZIP format
bjpn020i.pdf	Version 2.0 Installation Guide
bjpn020u.pdf	Version 2.0 User Manual
bjpn020t.pdf	Version 2.0 Technical Manual

2.2 Required Resources

2.2.1 RESOURCE AND PATIENT MANAGEMENT SYSTEM (RPMS)

The RPMS server portion of the PCM application does not require a specific version of Ensemble® or a specific operating system (OS). However, the RPMS server must be able to fully support the other required RPMS applications listed below and is therefore subject to any requirements needed to run those applications.

Note: BMX*4.0*3, BJPC*2.0*11, EHR*1.1*14, LEX*2.0*1003, and BSTS*1.0*3 are pre-requisite releases for the Prenatal Care Module Version 2.0 release and must be installed prior to the installation of the PCM KIDS release.

2.2.2 Required RPMS Server Software:

Table 2-2: Required RPMS Server Software

Module	Minimum Version
Veterans Administration (VA) FileMan (DI)	v22.0 Patch 1003
VA Kernel (XU)	v8.0 Patch 1015
BMXNet (BMX)	v4.0 Patch 3
IHS/VA Utilities (XB)	v3.0 through Patch 11

Module	Minimum Version
Patient Care Component PCC Data Entry (APCD)	v2.0 through Patch 10
IHS PCC Suite (BJPC)	v2.0 Patch 11
EHR 1.1	v1.1 Patch 14
Lexicon Utility	v2.0 Patch 1003
IHS Standard Terminology	v1.0 Patch 3

2.3 Before You Begin: Installation Issues

- Make a copy of this distribution for offline storage.
- Print all notes and readme files.
- To ensure a printed audit trail if any problems arise, capture the terminal output during the installation using an auxport printer attached to the terminal.

3.0 Installation Instructions

The PCM contains components that run on both the RPMS server and the client Personal Computer (PC) via EHR. Installation of the RPMS server components is conventional and consists of a Kernel Installation and Distribution System (KIDS) build. In addition, a setup file to install required Dynamic Linked Library (dll) files into EHR is included.

3.1 Disk Space

With Version 2.0 of Prenatal, approximately 15 MB of disk space on the server is needed for the `bjpn0200GUI.exe` to install the required dll files in EHR.

3.2 Pre-installation

Before installing the PCM application, the following items should be completed (in no particular order):

- If possible, initially load the software into a test account, then into the production account. There are no routines or globals to remove after the installation is complete.
- Refer to the remaining installation steps and sample installations (Sections 3.0 through Sections 4.0) for the applicable prompts and user responses. User responses appear in bold type.
- Ensure that the BMX system is installed and that a BMX monitor process is running. BMX's Integrated Security feature allows EHR sessions to connect to RPMS without having to re-specify access and verify codes every time. For this feature to work, the integrated security field of the BMX monitor port must be set to Yes. See the BMX User and Installation Manuals for details on BMX.
- Ensure the other required applications have been installed. Specifically verify that the IHS Standard Terminology (BSTS) application is connecting properly to the DTS server. See the BSTS v1.0 patch 3 installation manual for instructions on how to run the test option to verify BSTS is running properly.

4.0 Sample Installations

4.1 RPMS Server Install

The follow steps describe the process to install the KIDS build associated with the PCM release:

1. On the RPMS server, load and install the `bjpn0200.k` file using the KIDS menu options. From the **KIDS** menu, select the **Installation** menu.
2. From the **Installation** menu, select **Option 1: Load a Distribution**.
3. At the “Enter a Host File” prompt, type **bjpn0200.k**. It might be necessary to precede the file name with the appropriate host path.
4. At the “Want to Continue with Load? YES//” prompt, type **Yes** (or press the ENTER key to accept the default).
5. From the **Installation** menu, select **Option 2: Verify Checksums in Transport Global**. This option provides a mechanism for ensuring the integrity of your routines, verifies checksums for the components of the Transport global, and reports any errors uncovered.
6. At the “Select Install Name” prompt, type **PRENATAL CARE MODULE 2.0**.
7. The following KIDS options are not required but can be run if desired. If either of the options are run, at the “Select Install Name” prompt, type **PRENATAL CARE MODULE 2.0**.
 - a. **Back Up a Transport Global** – this option creates a MailMan message that will back up all current routines on the system that would be replaced by this release. Because this is a new release, no files will be replaced.
 - b. **Compare Transport Global** – this option performs a comparison check between the current system and the changes included with the installation.
8. From the **Installation** menu, select the **Install Packages(s)** option.
9. At the “Select Install Name” prompt, type **PRENATAL CARE MODULE 2.0**.
10. Respond to the following prompts as indicated:
 - a. At the “Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES//” prompt, type **NO**.
 - b. At the “Want KIDS to INHIBIT LOGONs during the install?//YES” prompt, type **NO**.

- c. At the “Want to DISABLE Scheduled Options, Menu Options and Protocols?// YES” prompt, type **NO**.

11. Type the device that will print the install messages.

12. Exit the **Installation** menu.

4.2 Prenatal EHR setup Installation

The installation of the `bjpn0200.exe` *must* be coordinated with the installation of the KIDS on the RPMS server so that EHR is ready after the KIDS is installed.

To install the prenatal GUI components in the EHR library, run `bjpn0200.exe`. The setup process will prompt the user for which components they wish to install. Generally, both the EHR Pregnancy Issues and Problems and EHR Prenatal Pick List components should be installed.

Before installing, it is necessary to find out the location on the server to install the new files to.

4.3 Sample RPMS Server Installation

Note: User responses appear in **bold type**.

Figure 4-1 shows how to select the KIDS installation menu:

```
Select OPTION NAME: XPD MAIN   Kernel Installation & Distribution System

      Edits and Distribution ...
      Utilities ...
      Installation ...

Select Kernel Installation & Distribution System 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 Option: 1   Load a Distribution
```

Figure 4-1: Selecting installation option

Other prompts are shown in Figure 4-2:

```
Enter a Host File: D:\RPMS_TST\bjpn0200.k <enter> *Note a different path may be
required here
```

```
KIDS Distribution saved on Feb 24, 2015@11:10:22
Comment: PRENATAL CARE MODULE 2.0

This Distribution contains Transport Globals for the following Package(s):
  PRENATAL CARE MODULE 2.0
Distribution OK!

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

Build PRENATAL CARE MODULE 2.0 has an Environmental Check Routine
Want to RUN the Environment Check Routine? YES//
  PRENATAL CARE MODULE 2.0
Will first run the Environment Check Routine, BJPN20EN

          Patch "BMX*4.0*3" is installed.
          Patch "BJPC*2.0*11" is installed.
          Patch "EHR*1.1*14" is installed.
          Patch "LEX*2.0*1003" is installed.
          The BSTS ICD-10 Patch is installed

**Verifying that BSTS connection to DTS is working. This may take several minute
s to complete**

**BSTS connection to DTS is working properly**
Use INSTALL NAME: PRENATAL CARE MODULE 2.0 to install this Distribution.

  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

You have 1 PENDING ALERTS
      Enter "VA to jump to VIEW ALERTS option

You've got PRIORITY mail!

Select Installation Option: 2  Verify Checksums in Transport Global
Select INSTALL NAME:      PRENATAL CARE MODULE 2.0      Loaded from Distribution
      Loaded from Distribution 2/24/15@11:12:22
      => PRENATAL CARE MODULE 2.0 ;Created on Feb 24, 2015@11:10:22

This Distribution was loaded on Feb 24, 2015@11:12:22 with header of
  PRENATAL CARE MODULE 2.0 ;Created on Feb 24, 2015@11:10:22
  It consisted of the following Install(s):
  PRENATAL CARE MODULE 2.0

Want each Routine Listed with Checksums: Yes//  YES
DEVICE: HOME//  Virtual

PACKAGE: PRENATAL CARE MODULE 2.0      Feb 24, 2015 11:12 am      PAGE 1
-----

BJPN20AU  Calculated  13604173
BJPN20EN  Calculated  5647612
BJPN20P1  Calculated  138845864
BJPN20PR  Calculated  1279562
```

```
BJPN20PS   Calculated   53251333
BJPN20RG   Calculated   92580005
BJPNAPI    Calculated   69830469
BJPNAPI1   Calculated   96122939
BJPNAPI2   Calculated  102933896
BJPNCPIP   Calculated  140346620
BJPNFAUD   Calculated   71985887
BJPNGNOT   Calculated   44666597
BJPNGPIP   Calculated  153415523
BJPNPBDT   Calculated  206373310
BJPNPDET   Calculated  179504517
BJPNPKL    Calculated   91024655
```

```
PACKAGE:  PRENATAL CARE MODULE 2.0      Feb 24, 2015 11:12 am      PAGE 2
```

```
-----
BJPNPRL    Calculated   68731665
BJPNPRNT   Calculated   53621875
BJPNPRUT   Calculated  164811614
BJPNPSET   Calculated   87634961
BJPNPUP    Calculated  167130881
BJPNPUTL   Calculated  154949066
BJPNSPOV   Calculated    7149223
BJPNSPRB   Calculated  137489632
BJPNUTIL   Calculated  207136506
BJPNVFIL   Calculated   38961390
```

26 Routines checked, 0 failed.

- 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

You have 1 PENDING ALERTS
Enter "VA to jump to VIEW ALERTS option

You've got PRIORITY mail!

```
Select Installation Option: 6 Install Package(s)
Select INSTALL NAME:      PRENATAL CARE MODULE 2.0      Loaded from Distribution
Loaded from Distribution  2/24/15@11:12:22
=> PRENATAL CARE MODULE 2.0 ;Created on Feb 24, 2015@11:10:22
```

```
This Distribution was loaded on Feb 24, 2015@11:12:22 with header of
PRENATAL CARE MODULE 2.0 ;Created on Feb 24, 2015@11:10:22
It consisted of the following Install(s):
```

```
PRENATAL CARE MODULE 2.0
Checking Install for Package PRENATAL CARE MODULE 2.0
Will first run the Environment Check Routine, BJPN20EN
```

```
    Patch "BMX*4.0*3" is installed.
    Patch "BJPC*2.0*11" is installed.
    Patch "EHR*1.1*14" is installed.
    Patch "LEX*2.0*1003" is installed.
    The BSTS ICD-10 Patch is installed
```



```
FILE:INFRAGISTICS2.WIN.MISC.V10.3.DLL
FILE:INFRAGISTICS2.WIN.ULTRAWINGRID.EXCELEXPOR.V10.3.DLL
FILE:INFRAGISTICS2.WIN.ULTRAWINGRID.V10.3.DLL
FILE:INFRAGISTICS2.WIN.ULTRAWINPRINTPREVIEWDIALOG.V10.3.DLL
FILE:INFRAGISTICS2.WIN.ULTRAWINSTATUSBAR.V10.3.DLL
FILE:INFRAGISTICS2.WIN.ULTRAWINTOOLBARS.V10.3.DLL
FILE:INFRAGISTICS2.WIN.V10.3.DLL
FILE:INFRAGISTICS2.WIN.ULTRAWINLISTBAR.V10.3.DLL
FILE:INFRAGISTICS2.WIN.ULTRAWINLISTVIEW.V10.3.DLL
FILE:RICHTEXTBOXPRINTCONTROL.DLL
FILE:BEHPOVCVG.DLL
IHS.PN.EHR.PRENATALPICKLIST.PRENATALPICKLISTCOMPONENT
IHS.PN.EHR.PRENATALPROBLEMLIST.PIPCOMPONENT

Updating Routine file...

Updating KIDS files...

PRENATAL CARE MODULE 2.0 Installed.
Feb 24, 2015@11:12:39

Not a VA primary domain

Install Completed
```

Figure 4-2: Sample Installation

4.4 Sample GUI Client Installation

The following section outlines the installation procedures for loading Prenatal EHR setup files:

1. Navigate to the folder on the server machine that contains the Prenatal EHR setup program and launch the **bjpn0200.exe** program. Figure 4-3 shows a sample display of the **bjpn0200.exe** program location:

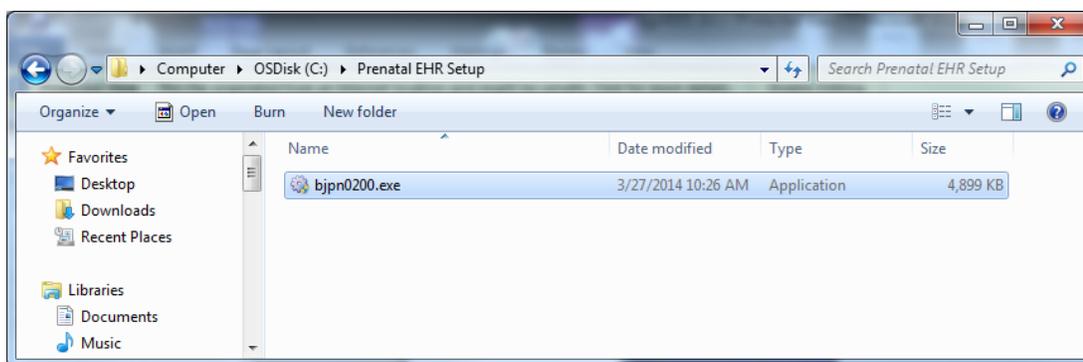


Figure 4-3: bjpn0200.exe program

2. Click **I Agree** on the **License Agreement** screen to continue, shown below in Figure 4-4:

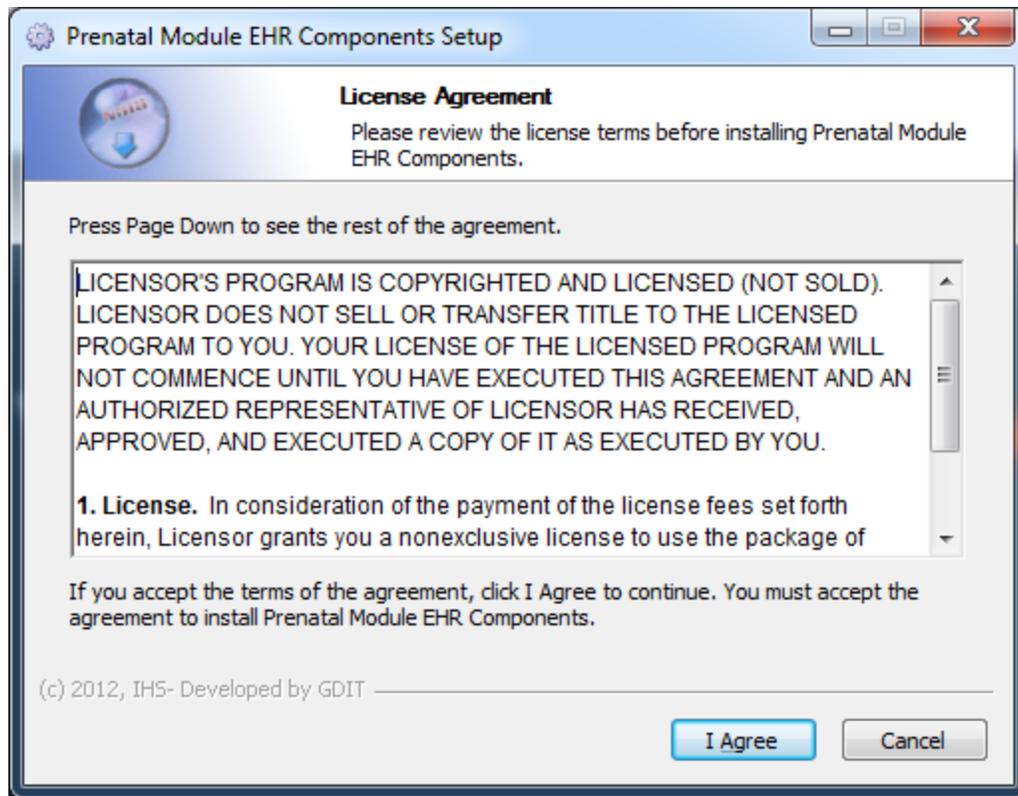


Figure 4-4: License Agreement screen

3. In the **Choose Components** screen (shown below in Figure 4-5), choose to install **EHR Prenatal Component Problem List** and the **EHR Prenatal Component Pick List**. Click **Next** to continue.

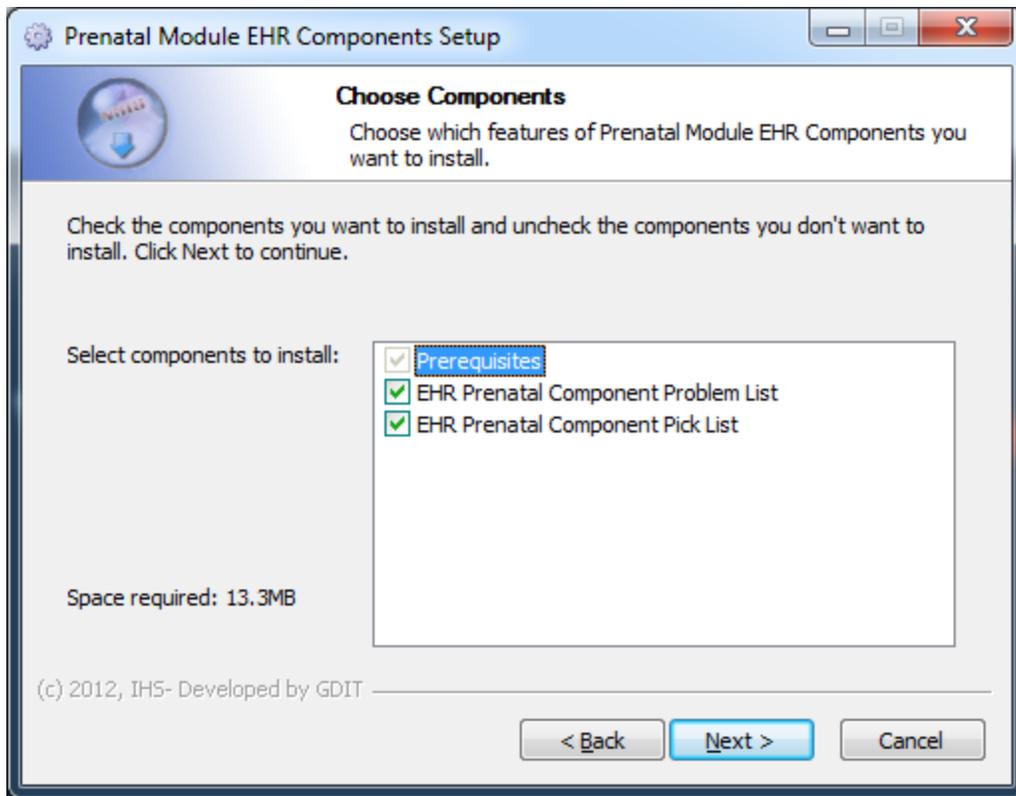


Figure 4-5: Choose Components Folder screen

In the **Choose Install Location** screen (shown below in Figure 4-6), select the location where to install Prenatal EHR setup files. Click **Install** to continue.

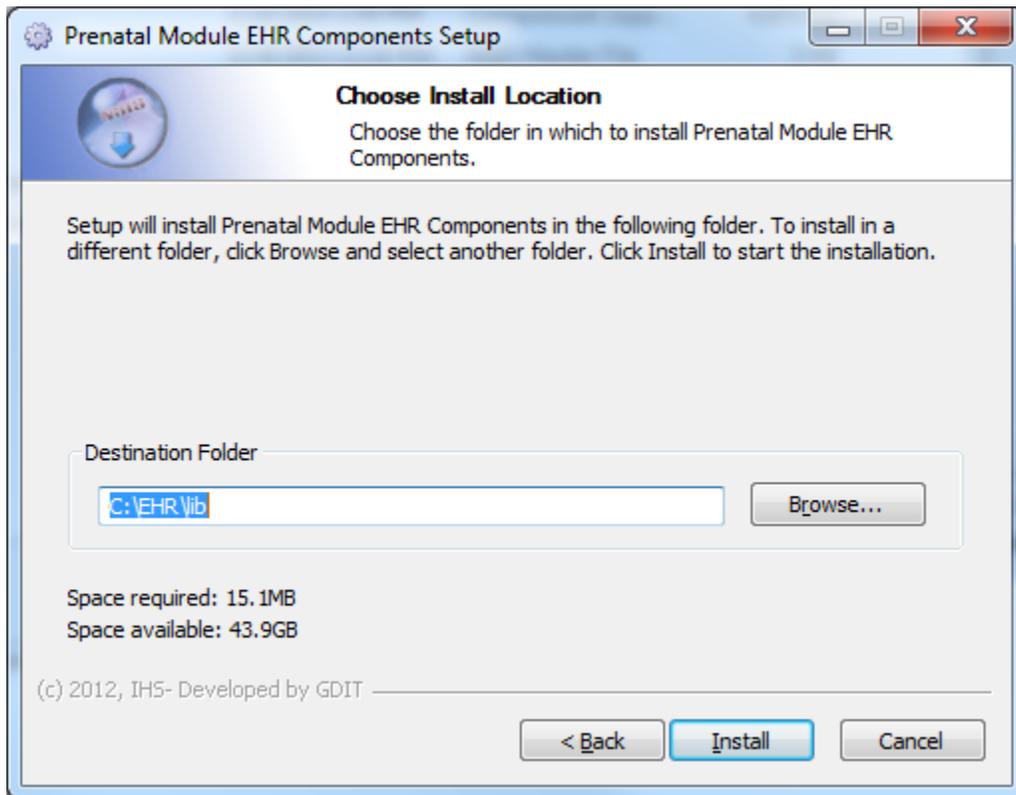


Figure 4-6: Choose Install Location screen

4. Click **Finish** to complete the installation. See Figure 4-7 for a display of this step:

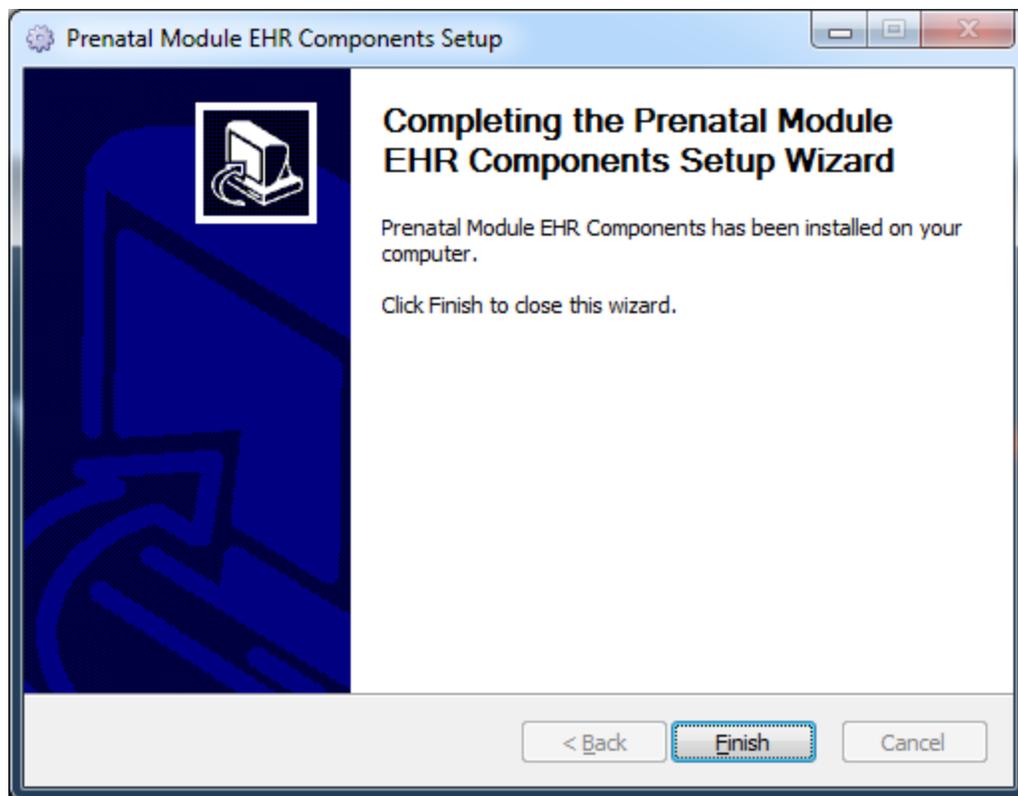


Figure 4-7: Installation Complete screen

5. Click **Close** to complete the installation.

5.0 Installation Configuration

5.1 Post Installation RPMS Parameter Definition

The Prenatal KIDS installation contains two new parameters relating to the new Prenatal components: The BJPN DISABLE PRENATAL EDITING parameter and the BJPN POST DEDD DAYS parameter.

5.1.1 BJPN DISABLE PRENATAL EDITING

The Prenatal components are accessible to users who have existing access to the regular EHR Problem List functionality. If there are specific users or user classes who should not have access to the new Prenatal components they can be set up in the new BJPN DISABLE PRENATAL EDITING parameter.

Figure 5-1 shows how to set the BJPN DISABLE PRENATAL EDITING parameter:

```
Select OPTION NAME: XPAR EDIT PARAMETER          Edit Parameter Values
Edit Parameter Values
                --- Edit Parameter Values ---

Select PARAMETER DEFINITION NAME: BJPN DISABLE PRENATAL EDITING      Disable Prenatal
Editing

BJPN DISABLE PRENATAL EDITING may be set for the following:

    100 User          USR      [choose from NEW PERSON]
    200 Class         CLS      [choose from USR CLASS]

Enter selection: 100 User      NEW PERSON
Select NEW PERSON NAME: USER, EXCLUDED

----- Setting BJPN DISABLE PRENATAL EDITING for User: USER, EXCLUDED -----
Value: YES

BJPN DISABLE PRENATAL EDITING may be set for the following:

    100 User          USR      [choose from NEW PERSON]
    200 Class         CLS      [choose from USR CLASS]

Enter selection:
```

Figure 5-1: Excluding users from access to the Prenatal components

5.1.2 BJPN POST DEDD DAYS

The Prenatal components contain a new parameter which allows users to control the number of days after a patient’s Definitive Estimated Date of Delivery (DEDD) in which the patient’s prenatal PIP can still be edited. Placing a positive numerical value in this field will allow the patient’s PIP to be edited up until the number of days specified after the EDD. For example, placing a “50” in this field will allow patient PIPs to be edited up to ‘50’ days following the patients’ DEDD. If no value is specified in this field, a default of “70” days is used.

Figure 5-2 shows how to set the BJPN POST DEDD DAYS parameter:

```
Select OPTION NAME:      XPAR EDIT PARAMETER      Edit Parameter Values
Edit Parameter Values
                        --- Edit Parameter Values ---
Select PARAMETER DEFINITION NAME:  BJPN POST DEDD DAYS  Prenatal Post EDD Dat
a Entry Days
----- Setting BJPN POST DEDD DAYS for System: 2011 DEMO-HO.ABQ.IHS.GOV -----
Number of Days: 75
-----
Select PARAMETER DEFINITION NAME:
```

Figure 5-2: Defining the number of allowable days (post DEDD) to allow edits of a patient’s PIP

5.2 Post Installation Prenatal User Setup

In order for users to be able to access the new PCM components, their user definitions must be modified. Any user desiring access to the PCM components must be assigned both the “BMXRPC” and “BJPNRPC” options as secondary menu options in their RPMS user profile. Failure to do so will result in a screen similar to the following figure when attempting to access the prenatal components. Figure 5-3 shows a sample screen which displays if either of the above options have not been assigned as secondary menus for a particular user:

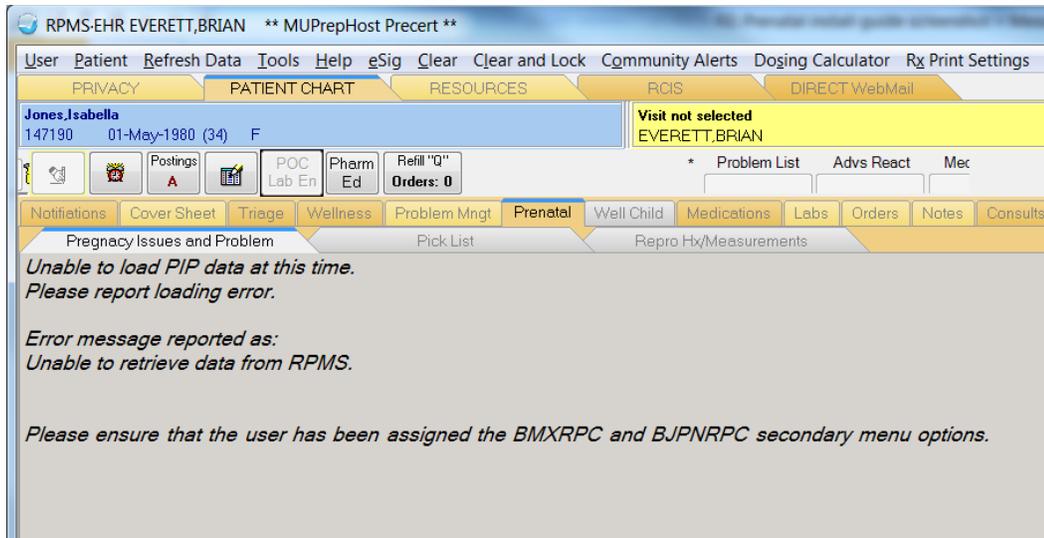


Figure 5-3: Screen detailing an issue with the user's definition

Glossary

Pregnancy Issues and Problems List (PIP)

New functionality created in the BJPN namespace to implement pregnancy problem tracking for SNOMED CT® terms.

Pregnancy Issues and Problems Pick List (PIPPL)

New functionality created in the BJPN namespace to implement pregnancy problem tracking for SNOMED CT® terms. This module enables user selection of SNOMED CT® terms to add to the PIP module.

Pregnancy Problems Pick List (PPL)

New functionality created in the BJPN namespace to implement pregnancy problem tracking for SNOMED CT® terms. This module enables user selection of SNOMED CT® terms to add to the PIP module.

Electronic Health Record (EHR)

An application used by medical organizations to track patient medical records and care.

ICD Codes

One of several code sets used by the healthcare industry to standardize data. The International Classification of Disease (ICD) codes are an international diagnostic coding scheme. In addition to diseases, ICD also includes several families of terms for medical-specialty diagnoses, health status, disablements, procedures, and reasons for contact with HCPs. IHS currently uses ICD-9 for coding.

Microsoft® (MS)

Software company that develops and distributes the Visual Studio® (VS) tool used to develop the Prenatal application.

Office of Information Technology (OIT)

The organization within IHS that is responsible for developing and maintaining RPMS and related IT functions.

Purpose of Visit (POV)

In RPMS, ICD codes and narrative describing the patient's purpose of visit (POV) are documented in PCC V POV.

Resource and Patient Management System (RPMS)

A series of integrated software components that includes clinical, administrative, and financial functions.

RPMS Patient Care Component (PCC)

Refers to functions within RPMS as a clinical data repository, storing visit-related data about a patient.

Software Quality Assurance (SQA)

The office within OIT responsible for ensuring that the system conforms to RPMS Programming Standards and Conventions (SAC).

Text Integration Utility (TIU)

Refers to functions within RPMS used to store long blocks of text in the medical record.

Visual Studio® (VS)

Microsoft software development tool and integrated development environment (IDE) used to develop the Prenatal application.

Acronym List

Acronym	Term Meaning
APCD	PCC Data Entry
API	Application Programmer Interface
BJPC	IHS PCC Suite
BJPN	Namespace for Prenatal files and routines
BMX	BMXNET
DEDD	Definitive Estimated Date of Delivery
DI	VA FileMan
DLL	Dynamic Link Library
EHR	Electronic Health Record
GUI	Graphical User Interface
HS	Health Summary
IEN	Internal Entry Number
IHS	Indian Health Service
KIDS	Kernel Installation and Distribution System
MS	Microsoft®
OIT	Office of the Information and Technology
OS	Operating System
PC	Personal Computer
PCM	Prenatal Care Module
PIP	Pregnancy Issues and Problems
POV	Purpose of Visit
RPC	Remote Procedure Call
RPMS	Resource and Patient Management System
SAC	Standards and Conventions
SNOMED CT®	Systematized Nomenclature of Medicine—Clinical Terms
TIU	Text Integration Utility
UI	User Interface
VA	Veteran's Administration
VS	Visual Studio
XB	IHS/VA Utilities
XU	VA KERNEL

Contact Information

If you have any questions or comments regarding this distribution, please contact the OIT Help Desk (IHS).

Phone: (888) 830-7280 (toll free)

Web: <http://www.ihs.gov/helpdesk/>

Email: support@ihs.gov