



RESOURCE AND PATIENT MANAGEMENT SYSTEM

Immunization Module

(BI)

Installation Guide & Release Notes

Version 8.4
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Office of Information Technology (OIT)
Division of Information Resource Management
Albuquerque, New Mexico

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Preface

This manual provides information about loading and installation of the Indian Health Service (IHS) Resource and Patient Management System (RPMS) Immunization Module v8.4 software. Information about setting up the Immunization Module v8.4 package (site parameters, keys, letters, etc.) is provided in the Immunization Module v8.4 User Manual.

1.0 Release Notes

1.1 Background

The original RPMS Immunization tracking software was written in the 1980s. Version 7.0, which was a complete rewrite of the Immunization software, began in 1996 with consultation from a national team of IHS field staff who developed a set of design requirements for the software. The current software, Immunization Module v8.4, replaces all previous versions (v8.xx, v7.xx, and v6.8).

2.0 New Features of Version 8.4

The following features are new to v8.4, categorized by menu options.

2.1 Most Important New Features

2.1.1 New Forecasting for 13-Valent Pneumococcal Conjugate Vaccine

Forecasting for the new 13-valent pneumococcal conjugate vaccine has been added to replace the 7-valent pneumococcal conjugate vaccine. Children < 59 months who completed the pneumococcal series with the 7 –valent product will be forecast to receive a dose of PCV13 vaccine in accordance with ACIP recommendations.

2.1.2 Changes to Forecasting Options 3 and 4 to Forecast Hepatitis A Vaccine Starting at 12 Months of Age

Previously Hepatitis A vaccine was forecast starting at 15 months of age for all forecasting option. Options 3 and 4 have been modified so that they will forecast Hepatitis A at 12 months of age.

2.1.3 New Forecasting Option Added

A new forecasting option, Option #6, has been added. This forecasting options forecasts the 3rd dose of IPV at 6 months and DTaP, Hib, MMR, Var, Hep A, and Pneum-conj at 12 months

2.1.4 New Forecasting for Influenza

In accordance with the ACIP recommendations, influenza forecasting is now available for ALL age groups. In the Managers Menu, under Site Parameters Edit (ESP), sites have the option to forecast for all ages, or to limit forecasting to those 6 months – 18 years and 50 years and older. Default is set to forecasting for ALL ages.

2.1.5 New Pneumococcal Vaccine High Risk Taxonomy

The Pneumococcal Vaccine High Risk taxonomy has been updated to include Asthma. In addition, under the Managers Menu in Site Parameters Edit (ESP), sites have the choice of including smoking in the taxonomy;

2.1.6 New Field in Lot Number Add/Edit Menu to Allow for Sub-Lot Designation

New field added to Lot Number Add/Edit to allow designation of sub-lots within a facility or within an RPMS database shared by multiple facilities. This will preserve the true lot#, but allow providers and sites to designate sub-lots for inventory tracking purposes.

2.1.7 Change to Adolescent Report

The filter to include only patients who are active in the immunization package in the Adolescent Report has been removed. Sites have the option to select from the following patients groups : Active Clinical User (2 visits/3 years), User Population (1 visit/3 year), or All Registered (all patients registered in the RPMS system).

2.1.8 Change to 3 – 27 Month Old Report

Report parameter #6 has been changed to say “Include Pneumococcal & VAR”. The default is “Yes”. This includes Pneumococcal conjugate vaccine and Varicella vaccine to the “Minimum Needs” for the appropriate age groups.

2.2 PATIENT MENU

2.2.1 New Display for Vaccines Imported from a State Immunization Registry

Vaccines added to the immunization history via data exchange with a state registry will be designated by a “+”.

2.2.2 New Field for Documenting Consent for Participation in a State Immunization Registry

Under “Patient Edit” a new field to document consent for participation in a state immunization registry was added. Options are “Y”, “N”, or blank. This information is displayed in the “Additional Information” section of the patient record.

2.2.3 Ability to Edit Refusal Date

Option to edit existing refusal date for a vaccine. Only one refusal date will display in the Immunization History, but a new refusal entry will be added to the PCC Refusal file.

2.2.4 Changes to Forecasting

In addition to the changes to the forecasting options listed above, the following changes have been made:

- a. Recognition of a 2 dose Adolescent Hep B schedule - will not forecast 3rd dose for patients 11-15 years who received Merck Hepatitis B vaccine product
- b. Females who start HPV at 9 years will have subsequent doses forecast on schedule

2.2.5 Patient Lists and Letters

In Patient Lists and Letters the following filters have been added to the parameters:

- a. Parameter 3 – Patient Group – Refusals – can limit this group to refusals for a specific vaccine and date range
- b. New Parameter 6 – “Designated Provider” – this allows sites to run lists by designated providers.
- c. Parameter 10 – Additional Information – new data elements include refusals and location where shot was given. Added the following Additional Information elements in Lists and letters:

2.3 REPORTS Menu

2.3.1 Adult Report – Inclusion of Zostavax

The adult report now includes coverage with Zostavax vaccine for adults 60 years and older.

2.3.2 Influenza Report

The influenza report has been expanded to include the following age groups: 6 – 59 months, 5 – xx, 18-49 high risk, 18-49 years (excluding high risk), 50 – 64 years and 65 years. Sites can also select the reporting period (e.g. Sept – Dec, or Sept – March). The influenza report can be run as a standard report for seasonal influenza, or H1N1 report for 2009 H1N1 coverage.

2.4 MANAGERS MENU

2.4.1 Change to Pneumococcal Forecasting Options

Under ESP (site Parameters Edit), can select minimum age for 23-valent pneumococcal forecasting to be 55 years or 65 years. Option to forecast every 6 years has been removed.

2.4.2 Changes to “Short Names” for Vaccines

“Flu-Split” has been changed to “Flu-TIV”. Influenza-NOS has been changed to “Flu-NOS”.

2.4.3 Update Vaccine Table and Manufacturers Table

The Vaccine Table has been updated with changes to CVX or MVX codes made by CDC in recent months. The following Vaccines have been added: HPV, NOS; MeningCV4O (Menveo; Hiberix (PRP-T); Typhus, historical; DTaPIP VHepBHib; Flu-Highdose.

2.4.4 Changes to High Risk Factor Check

Under ESP (Site Parameters >Edit) when enabling the High Risk Factor Check, sites are asked whether they want to include smokers in the high risk taxonomy for pneumococcal vaccine.

3.0 Installation Notes

Prefix: BI
Current Version: 8.4

Warning: Read entire notes file prior to attempting any installation.

3.1 General Information

1. Make a copy of this distribution for offline storage.
2. Print all notes/readme files.
3. It is recommended that the terminal output during the installation be captured using an auxport printer attached to the terminal at which you are performing the software installation. This will ensure a printed audit trail if any problems should arise.

3.2 Contents of Distribution

File	Description
bi__0840.k	KIDS Installation file
bi__0840win.zip	Immserve Files for Windows PCs
bi__0840unix.tar	Immserve Files for AIX machines
bi__084i.pdf	Installation Guide and Release Notes (this document)
bi__084t.pdf	Technical Manual
bi__084u.pdf	User Manual

3.3 Requirements

- Kernel v8 or later
- FileMan v22
- XB/ZIB v3.0 through patch 11 (xb__0300.11k)
- IHS PCC Suite v2.0 patch 2 (bjpc0200.02k)

- IHS Clinical Reporting System v9.0 through patch 1 (bgp_0900.01k)
- Immunization v8.2 or later, or Immunization never before installed
- If using PIMS, then PIMS v5.3 through patch 1004
 - Only necessary if the site is using PIMS
- If Mental Health is loaded, then Mental Health AMH v3.0 through patch 10
 - Only necessary if the site has AMH
- Caché 4.1 or later
- Caché \$ZF Heap of at least 124335

Note: It is *critically important* that the screen handling codes for C-VT100 in the Terminal Type File be up to date.

4.0 Installation Instructions

In all namespaces running the RPMS Immunization, follow these steps to install v8.4:

1. Be sure that a good backup of the Caché database has been obtained and is available. Disable logins and ensure all users are off, or at least ensure that PCC Data Entry for immunizations is not occurring and that Health Summaries are not being printed.
 2. Load the ImmServe utility by performing the steps described below. The process differs slightly between PCs and unix/AIX.
 - a. PCs running Windows NT or XP:
 - i. You must first create a new folder to hold the new Immserve files.
Create a new folder named “C:\Program Files\Immserve84”.
 - ii. In the folder that you just created, unzip the file “bi__0840win.zip” (specific to NT/XP systems).
 - b. Unix machines running AIX, Linux, or Solaris:
 - i. You must first create a new directory to hold the new Immserve files.
Create a new directory named “/usr/local/immserve84”.
 - ii. In the directory that you just created, untar (tar xvf) the file “bi__0840unix.tar” (specific to unix systems).
 - iii. Important: be sure the unix permissions on the “/usr/local/immserve84” directory you created are set to “-rwxr-xr-x”.
This is accomplished with the unix command **chmod 755 immserve84**.
- Note:** When “bi__0840unix.tar” is untarred, files with a “.so” extension should have permission attributes of “-rwxr-xr-x”. If ordinary users are unable to execute Immserve, check the permissions on this file.
3. Under the KIDS menu select the “Installation” option, and then select the “Load a Distribution” option.
 - a. At the “Enter a Host File” prompt, type the filename **bi__0840.k** preceded by the appropriate pathname for your system (for example, /usr/spool/uucppublic/bi__0840.k).

- b. Answer **YES** to questions concerning “Continue to load” and “Environmental Check Routine.”
4. Under the same KIDS Installation menu, select the “Install Package” option.
 - a. Type **IMMUNIZATION 8.4** (or press the spacebar).
 - b. At the “DEVICE” prompt, type **HOME**. Do not send the output of this installation to a printer, as there is some user interaction required. (You may capture the output to a buffer or print screen).
5. At the programmer prompt, run the routine BINTEG (> D ^BINTEG).
 - None of the routines listed should have “has been modified” beside them.
6. Be sure that the three BIZ security keys are assigned to the site manager and immunization program manager.

Also check the site parameters (IMM>MGR>ESP). Each site parameter presents online help when selected and can be successfully edited by knowledgeable people, even if they have not received training in the package.

7. Enable logins and/or BIMENU.
8. There are many telnet terminal emulators available today. Many of them lack features such as slave printing, printscreen, reverse scrolling, cut and paste, etc. NetTerm by Intersoft has proven to be an excellent telnet terminal emulator for Windows and NT. Trial license versions may be obtained online at:
<http://www.securenetterm.com>.
9. All site parameters should be reviewed and edited as necessary on the **Edit Site Parameters** screen (MGR>ESP).

Note: If multiple RPMS sites/facilities are set up on one computer, the site parameters for each site must be reviewed and updated.

10. Review the package setup information found under the **Manager** menu (MGR>PKG), which provides important information on options, security keys, devices, old menu options, the vaccine table, duplicate lot numbers, and more.

Note: The package setup information is also printed in an appendix of the Immunization Module User Manual.
--

4.1 Routines and Official Checksums

The following table provides information for routines and checksums.

Routine	Checksum
BIAGE	7498
BIAPCHS	8720
BICMGR	3464
BIDTAB	2167
BIDU	8525
BIDU1	4293
BIDUPLT	4182
BIDUPLT1	2018
BIDUR	12145
BIDUR1	3212
BIDUVLS	5435
BIDUVLS1	7756
BIDUVLS2	7113
BIDX	4337
BIENVCHK	581
BIETAB	1718
BIEXP	2645
BIEXP1	5563
BIEXP2	6247
BIEXP3	3320
BIEXPRT2	6288
BIEXPRT3	10791
BIEXPRT4	3658
BIEXPRT5	11191
BIEXPRT8	1911
BIFMAN	9402
BIHELP	2785
BIHS	1228
BIKEY	3571
BIKEY1	6147
BIKEY2	1517
BILETPR	7074
BILETPR1	14353
BILETPR2	2255
BILETPR3	5348
BILETPR4	2604
BILETW	4221
BILETW1	6876
BILETW2	9389
BILOGO	4863
BILOT	9921

Routine	Checksum
BIL0T1	14812
BIL0T2	2005
BIMFI	2958
BINFO	1594
BINTEG	4388
BIO	472
BIOUTPT	14076
BIOUTPT1	10778
BIOUTPT2	9445
BIOUTPT3	8669
BIOUTPT4	11736
BIOUTPT5	10577
BIPATC0	4361
BIPATC01	2123
BIPATC02	5995
BIPATE	5941
BIPATER	5735
BIPATER1	4688
BIPATPF	4249
BIPATUP	6069
BIPATUP1	12924
BIPATUP2	11907
BIPATUP3	3711
BIPATVW	7312
BIPATVW1	10419
BIPATVW2	11609
BIPATVW3	9410
BIPCC	1431
BIPOST	4112
BIPRE	4965
BIREP	7034
BIREPA	5807
BIREPA1	3760
BIREPA2	6802
BIREPA3	5540
BIREPD	6649
BIREPD1	4863
BIREPD2	8496
BIREPD3	6557
BIREPD4	11021
BIREPF	8059
BIREPF1	5124
BIREPF2	5455
BIREPF3	5743
BIREPF4	8681

Routine	Checksum
BIREPH	6028
BIREPH1	3833
BIREPH2	7663
BIREPH3	7364
BIREPL	6540
BIREPL1	4756
BIREPL2	7287
BIREPL3	11371
BIREPQ	6823
BIREPQ1	5030
BIREPQ2	4917
BIREPQ3	5226
BIREPQ4	6829
BIREPT	6872
BIREPT1	4771
BIREPT2	6232
BIREPT3	4776
BIREPT4	9396
BIREPVP	5196
BIRESTD	5080
BIRPC	9402
BIRPC1	5998
BIRPC2	4024
BIRPC3	9580
BIRPC4	9281
BIRPC5	3491
BIRPC6	3167
BISCAN	6445
BISELEC1	9009
BISELEC2	5998
BISELECT	10194
BISITE	2592
BISITE1	5031
BISITE2	12306
BISITE3	10466
BISITE4	8495
BITEST	1108
BITN	14571
BITN2	6707
BITRS	2383
BITX	439
BITXA	3409
BITXB	3316
BITXC	3592
BIUTL1	13837

Routine	Checksum
BIUTL11	14191
BIUTL2	14311
BIUTL3	6961
BIUTL4	13353
BIUTL5	7344
BIUTL6	13005
BIUTL7	14763
BIUTL8	8885
BIUTLFIX	8262
BIVACED	5553
BIVACED1	5558
BIVGRP	3568
BIVGRP1	3352
BIVISIT	13920
BIVISIT1	8211
BIVISIT2	4745
BIVT100	3350
BIVTAB	3638
BIW	3366
BIXCALL	7699
BIXRPC	5708

5.0 Sample Installations

5.1 Sample Caché Install

```

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: LLoad a Distribution
Enter a Host File: /usr/spool/uucppublic/bi__0840.k

KIDS Distribution saved on Dec 05, 2005@15:42:29
Comment: Immunization Package v8.4, 04/15/2010, CIM/ER/Demo User

This Distribution contains Transport Globals for the following Package(s):
IMMUNIZATION 8.4
Distribution OK!

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

Build IMMUNIZATION 8.4 has an Enviromental Check Routine
Want to RUN the Environment Check Routine? YES//
IMMUNIZATION 8.4
Will first run the Environment Check Routine, BIENVCHK

Use INSTALL NAME: IMMUNIZATION 8.4 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

Select Installation Option: install Package(s)
Select INSTALL NAME:      IMMUNIZATION 8.4      Loaded from Distribution      Loaded
from Distribution 06/05/07@10:54:16

```

```
=> Immunization Package v8.4, 12/05/2005, CIM/ER/Demo User ;Create

This Distribution was loaded on Feb 11, 2004@10:54:16 with header of
Immunization Package v8.0b, 06/05/2007, CIM/ER/Demo User ;Created on Jun
01, 2007@15:42:29
It consisted of the following Install(s):
IMMUNIZATION 8.4
Checking Install for Package IMMUNIZATION 8.4
Will first run the Environment Check Routine, BIENVCHK

Install Questions for IMMUNIZATION 8.4

Incoming Files:

9000010.11V IMMUNIZATION
Note: You already have the 'V IMMUNIZATION' File.

9000010.12V SKIN TEST
Note: You already have the 'V SKIN TEST' File.

9002084 BI PATIENT
Note: You already have the 'BI PATIENT' File.

9002084.01BI CASE MANAGER
Note: You already have the 'BI CASE MANAGER' File.

9002084.02BI SITE PARAMETER
Note: You already have the 'BI SITE PARAMETER' File.

9002084.1 BI PATIENT IMMUNIZATIONS DUE
Note: You already have the 'BI PATIENT IMMUNIZATIONS DUE' File.

9002084.11BI PATIENT CONTRAINDICATIONS
Note: You already have the 'BI PATIENT CONTRAINDICATIONS' File.

9002084.12BI PATIENT FORECAST ERRORS
Note: You already have the 'BI PATIENT FORECAST ERRORS' File.

9002084.33BI TABLE ERROR CODE (including data)
Note: You already have the 'BI TABLE ERROR CODE' File.
I will OVERWRITE your data with mine.

9002084.4 BI LETTER
Note: You already have the 'BI LETTER' File.

9002084.45BI LETTER SAMPLE (including data)
Note: You already have the 'BI LETTER SAMPLE' File.
I will OVERWRITE your data with mine.

9002084.61BI USER SELECTIONS
Note: You already have the 'BI USER SELECTIONS' File.
```

```
9002084.62BI USER DATE-LOC LINE
Note: You already have the 'BI USER DATE-LOC LINE' File.

9002084.63BI USER AGE RANGE
Note: You already have the 'BI USER AGE RANGE' File.

9002084.7 BI PACKAGE INFORMATION (including data)
Note: You already have the 'BI PACKAGE INFORMATION' File.
I will OVERWRITE your data with mine.

9002084.8 BI TABLE REACTION (including data)
Note: You already have the 'BI TABLE REACTION' File.
I will OVERWRITE your data with mine.

9002084.81BI TABLE CONTRA REASON (including data)
Note: You already have the 'BI TABLE CONTRA REASON' File.
I will OVERWRITE your data with mine.

9002084.91BI TABLE DATA ELEMENT (including data)
Note: You already have the 'BI TABLE DATA ELEMENT' File.
I will OVERWRITE your data with mine.

9002084.93BI TABLE VACCINE GROUP (SERIES TYPE) (including data)
Note: You already have the 'BI TABLE VACCINE GROUP (SERIES TYPE)' File.
I will OVERWRITE your data with mine.

9002084.94BI IMMUNIZATION TABLE HL7/CVX STANDARD (including data)
Note: You already have the 'BI IMMUNIZATION TABLE HL7/CVX STANDARD' File.
I will OVERWRITE your data with mine.

9002084.97BI TABLE MANUFACTURERS (including data)
Note: You already have the 'BI TABLE MANUFACTURERS' File.
I will OVERWRITE your data with mine.

9999999.41IMMUNIZATION LOT
Note: You already have the 'IMMUNIZATION LOT' File.

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

Want KIDS to INHIBIT LOGONs during the install? YES// n NO

Enter the Device you want to print the Install messages.
Enter a '^' to abort the install.

DEVICE: HOME// Virtual

-----
Install Started for IMMUNIZATION 8.4 :
Jun 05, 2007@10:54:50

Build Distribution Date: Dec 05, 2005
```

```
Installing Routines:
    Jun 05, 2007@10:54:51

Immunization v8.4
    *   v8.4 PRE-INIT PROGRAM   *

9002084
9002084.01
9002084.02
9002084.03
9002084.04
9002084.1
9002084.11
9002084.12
9002084.33
9002084.4
9002084.41
9002084.42
9002084.43
9002084.44
9002084.45
9002084.46
9002084.47
9002084.48
9002084.49
9002084.61
9002084.611
9002084.62
9002084.63
9002084.7
9002084.701
9002084.8
9002084.81
9002084.91
9002084.93
9002084.94
9002084.97
9999999.41

Data Dictionary deletion complete.
Old BI standard tables deletion complete.

The Pre-Initialization Program is removing all old Remote
Procedure Calls. Please stand by...

The Pre-Initialization Program is removing all old Screenman
forms and blocks. Please stand by...

Screen deletions complete.

The Pre-Initialization Program is removing all old
List Templates. Please stand by...

The Pre-Initialization Program is removing all old Protocols
Please stand by...

Installing Data Dictionaries:
    Jun 11, 2008@10:54:58

Installing Data: ..
```

```
Jun 11, 2008@10:54:59

Installing PACKAGE COMPONENTS:

Installing SECURITY KEY

Installing FUNCTION

Installing PRINT TEMPLATE

Installing INPUT TEMPLATE

Installing FORM

Installing PROTOCOL
  Located in the BI (IMMUNIZATION) namespace.
  Located in the BI (IMMUNIZATION) namespace.
  Located in the BI (IMMUNIZATION) namespace.
  .
  .
  .
  Located in the BI (IMMUNIZATION) namespace.
  Located in the BI (IMMUNIZATION) namespace.
  Located in the BI (IMMUNIZATION) namespace.

Installing REMOTE PROCEDURE

Installing LIST TEMPLATE

Installing OPTION
  Jun 11, 2008@10:55:01 Running Post-Install Routine: ^BIPOST.

    - This concludes the Post-Initialization program. -

          * CONGRATULATIONS! *

    You have successfully installed Immunization v8.4.

    Press ENTER/RETURN to continue or "^" to exit:

Install Completed
```

Figure 5-1: Screens that will be displayed during a typical installation

Contact Information

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

Phone: (505) 248-4371 or (888) 830-7280 (toll free)

Fax: (505) 248-4363

Web: <http://www.ihs.gov/GeneralWeb/HelpCenter/Helpdesk/index.cfm>

Email: support@ihs.gov