



#### RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **Immunization Module**

(BI)

# **Installation Guide and Release Notes**

Version 8.5 November 2011

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

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## **Preface**

This manual provides information regarding only the loading and installation of the Indian Health Service RPMS Immunization Module v8.5 software. Information regarding the setup of Immunization v8.5 (site parameters, keys, letters, etc.) is provided in the Immunization v8.5 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 that developed a set of design requirements for the software. The current version 8.5 software replaces all previous versions (v8.xx, v7.xx, and v6.8).

## 2.0 New Features in Version 8.5

## 2.1 Most Important New Features

Version 8.5 includes updated forecasting for HPV in males, PCV13, IPV, influenza in children, Tdap, Zoster, and Meningococcal conjugate (MCV) vaccines, The 3-27 month Quarterly Report is updated to include new "on-time" logic. There is a PCV report to document receipt of PCV13 vaccine. The VAC report can be printed by vaccine lot number.

### 2.2 PATIENT MENU

# 2.2.1 Updated Forecasting: HPV in males, IPV, Influenza in children, Tdap, Mening booster

- HPV forecasts in males 19-18 (26) years who receive 1 dose.
- PCV13 forecasts in 14-59 month olds who received 4 doses of PCV7
- IPV3 to 4 interval 6 months; IPV4 must be age 4 years or older
- Influenza only one dose required in children who received Flu in 2010-11
- Tdap forecast one dose for all ages regardless of interval since Td, including 7-10 year olds incompletely vaccinated and 65+ year olds
- Meningococcal booster required at 16 yrs for those who received dose before 16 yrs.

# 2.2.2 Contraindications: Immunodeficient status to include Rotavirus

Updated "Contraindications" of immunodeficient to include Rotavirus

## 2.2.3 Add/Edit Screen: Disable VFC in 19 years and older

VFC eligibility will no longer be displayed and completed for patients 19 years and older.

## 2.2.4 Add intradermal (ID) injection sites

Added injection sites RID and LID for right/left intradermal.

#### 2.2.5 Patient Lists and Letters

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

- Parameter 3: Patient Group Beneficiary. Users can limit this group to only American Indian/Alaska Beneficiaries
- Parameter 10: Additional Information. New data element includes VFC status

#### 2.3 REPORTS MENU

## 2.3.1 3-27 month Quarterly Report: new 'on-time' logic

- The 3-27 month Report logic now counts children current for Hib and PCV if they started late but are considered 'up-to-date' per the catch up schedule
- Hib and Rotavirus vaccine logic now accounts for different formulations and different dose numbers needed when calculating up to date status.
  - 3-27 month report forecasting logic for Hib, PCV, Rotavirus

Vaccine	3-4mo	5-6mo	7-15mo	16-18mo	19-23mo	24-27
Hib						
Pedvax (all doses <12mo)	1	2	2	3 or 2 ≥ 12 mo. 1 ≥ 15 mo.	3 or 2 ≥ 12 mo. 1 ≥ 15 mo.	3 or 2 ≥ 12 mo. 1 ≥ 15 mo.
ActHIB	1	2	3 or $2 \ge 7$ mo.	4 or $3 \ge 7$ mo. $2 \ge 12$ mo. $1 \ge 15$ mo.	4 or $3 \ge 7$ mo. $2 \ge 12$ mo. $1 \ge 15$ mo.	4 or $3 \ge 7 \text{ mo}$ . $2 \ge 12 \text{ mo}$ . $1 \ge 15 \text{ mo}$ .
PCV (PCV7 and/or PCV13)	1	2	3 or 2 ≥ 7 mo.	4 or $3 \ge 7$ mo. $2 \ge 12$ mo. $1 \ge 24$ mo.	4 or $3 \ge 7$ mo. $2 \ge 12$ mo. $1 \ge 24$ mo.	4 or 3 ≥ 7 mo. 2 ≥ 12 mo. 1 ≥ 24 mo.
Rotavirus						
RotaTeq (Rota-5)	1	2	3	3	3	3
Rotarix (Rota-1)	1	2	2	2	2	2

## 2.3.2 Adult Report

- Age Range broadened to 19 years and older.
- Report includes coverage with: Tdap ever, Tdap/Td in past 10 years, Pneumococcal, and HPV in 19-26 year old females and males.

## 2.3.3 VAC Report

The VAC Report has a new option to run report by vaccine lot number.

#### 2.3.4 PCV Report

There is a new PCV report to show PCV13 vaccine usage by age group and time period.

#### 2.3.5 Adolescent Report

The Adolescent report has been revised as outlined below:

- Added male denominators and coverage for HPV,
- Underreporting of Flu immunizations corrected,
- Changed the Up-to-date measure for Current/Not current. Current = 1Tdap/Td and 1 Mening.

#### 2.4 MANAGERS MENU

#### 2.4.1 Add optional Zoster Forecasting

Under ESP (Edit Site Parameters) Option #11, users can choose to forecast for Zoster vaccine in all adults >60 years.

# 2.4.2 Automatically activate children <36 months with no community listed

## 2.4.3 Update Vaccine Table and Manufacturers Table

The Vaccine Table has been updated with changes made by CDC to the CVX (vaccine) and MVX (manufacturer) codes in recent months. The following vaccines have been added: Flu-dermal (Influenza intradermal vaccine), Adeno-oral, Tet Tox, na (Tetanus toxoid, non-adsorbed), Td-NA (Tetanus diphtheria, non-adsorbed).

## 2.4.4 Changes to High Risk Factor Check

Under ESP (Edit Site Parameters) updated the code that looks for smoking related health factors.

#### 2.4.5 Add NDC codes to Lot number add/edit

Added NDC field to the Lot number add/edit screen which links to a list of NDC codes. If a NDC code is entered here, it will automatically populate in the Add Immunization Screen in the Patient Menu when a lot number is added.

#### 2.4.6 Export Vaccine Table to Excel

A new feature added which sends file named RPMS Vaccine Table.cxv to Host File Server.

## 2.4.7 Security Key BIZ LOT ONLY Check/Fix

A check on the integrity of the BIZ LOT ONLY Security Key in locking the BI LOT NUMBER NON-MANAGER Option is automatically performed when Imm v8.5 is installed. (The BI LOT NUMBER NON-MANAGER Option gives "off-menu" access to a user, such as a pharmacist, to add and maintain the Lot Number Inventory without gaining access to the rest of the Manager Menu in the Immunization Package.) It may be necessary to reassign the BIZ LOT ONLY key to some users who previously had access but find it missing after the installation of Imm v8.5.

### 3.0 Installation Notes

Prefix: B
Current Version: 8.5

Read entire notes file prior to attempting any installation

## 3.1 General Information

- Make a copy of this distribution for offline storage.
- Print all note/readme files.
- 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		
bi0850.k	KIDS installation file		
bi0850win.zip	Immserve Files for Windows PCs		
bi0850unix.tar	Immserve Files for AIX machines		
bi085i.pdf	Installation Guide and Release Notes (this document)		
bi085s.pdf	Security Manual		
bi085t.pdf	Technical Manual		
bi085u.pdf	User Manual		

## 3.3 Required Resources

- Kernel v8 or later
- FileMan v22
- Immunization v8.4 or later, or Immunization never before installed
- Cache 4.1 or later
- Cache \$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.

# 3.4 Before You Begin: Installation Issues

None

## 4.0 Installation Instructions

In all Namespaces running RPMS Immunization:

- 1. Be sure that a good backup of the Cache 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 following steps. The process differs slightly for PC's versus unix/AIX. For PCs running Windows NT or XP:
  - a. You must first create a new folder to hold the new Immserve files.

Create a new folder named: C:\Program Files\Immserve85

b. In the folder that you just created, unzip the file:bi\_0850win.zip (which is specifically for NT/XP)

Unix machines running AIX, Linux, or Solaris:

- a. You must first create a new directory to hold the new Immserve files.
  - Create a new directory named: /usr/local/Immserve85
- b. In the directory that you just created, untar (tar xvf) the file: bi\_0850unix.tar (which is specifically for unix systems)
- c. Important! The unix permissions on the /usr/local/Immserve85 directory you created must be: -rwxr-xr-x

This is accomplished with the unix command:

chmod 755 Immserve85

**Note**: The untarring of "bi\_\_0850unix.tar" should give the files with a ".so" extension 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 Installation, and then select Load a Distribution.
  - a. At the "Enter a Host File:" prompt, type the filename **bi\_0850.k** preceded by the appropriate pathname for your system (for example, /usr/spool/uucppublic/bi\_0850.k).
  - b. Answer YES to questions concerning "Continue to load" and "Environmental Check Routine."

- 4. Under the same KIDS Installation menu, select Install Package.
  - a. Type **IMMUNIZATION 8.5** (or press the spacebar).
  - b. At the "DEVICE:" prompt, select 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. 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.
- 6. Enable logins and/or BIMENU.
- 7. If this software is being used in the "roll and scroll" environment (as opposed to EHR), ensure that a robust terminal emulator is in use on the client machines. Some telnet terminal emulators lack features such as reverse scrolling, highlighting, slave printing, use of function keys, cutting and pasting, etc. NetTerm by Intersoft is an excellent telnet terminal emulator for Windows. Trial license versions may be obtained online at: <a href="https://www.securenetterm.com">www.securenetterm.com</a>
- 8. 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.

9. 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

Routine	Checksum	1
BIAGE	7500	
BIAPCHS	8722	
BICMGR	3466	
BIDTAB	2169	
BIDU	8915	
BIDU1	4378	

Routine Checksum
BIDUPLT 4209
BIDUPLT1 2020
BIDUR 12447
BIDUR1 3214
BIDUVLS 5673
BIDUVLS1 7998
BIDUVLS2 7448
BIDX 4959
BIENVCHK 4227
BIETAB 1720
BIEXP 3647
BIEXP1 5565
BIEXP2 6249
BIEXP3 3322
BIEXPRT2 6283
BIEXPRT3 10793
BIEXPRT4 3660
BIEXPRT5 11575
BIEXPRT8 1913
BIFMAN 9404
BIHELP 2787
BIHS 1230
BIKEY 3573
BIKEY1 6149
BIKEY2 1519
BILETPR 7076
BILETPR1 14891
BILETPR2 2817
BILETPR3 5350
BILETPR4 2606
BILETVW 4223
BILETVW1 6878
BILETVW2 9391
BILOGO 4867
BILOT 10141
BILOT1 14723

Routine Checksum
BILOT2 2846
BIMFI 2960
BINFO 1596
BINTEG 4490
BIO 474
BIOUTPT 14174
BIOUTPT1 11002
BIOUTPT2 9447
BIOUTPT3 10830
BIOUTPT4 13014
BIOUTPT5 11067
BIPATCO 4363
BIPATCO1 2125
BIPATCO2 5997
BIPATE 6238
BIPATER 5737
BIPATER1 4690
BIPATPF 4251
BIPATUP 6071
BIPATUP1 13562
BIPATUP2 13531
BIPATUP3 4937
BIPATVW 7314
BIPATVW1 10421
BIPATVW2 11663
BIPATVW3 9414
BIPCC 1433
BIPOST 4322
BIPRE 4967
BIREP 8828
BIREPA 6351
BIREPA1 3894
BIREPA2 7825
BIREPA3 5621
BIREPD 6997
BIREPD1 4912

	01 1	
	Checksu	m
BIREPD2	9416	
BIREPD3	7182	
BIREPD4	10790	
BIREPF	8801	
BIREPF1	5482	
BIREPF2	6178	
BIREPF3	6146	
BIREPF4	8679	
BIREPH	6381	
BIREPH1	3835	
BIREPH2	7691	
BIREPH3	7694	
BIREPL	7046	
BIREPL1	4925	
BIREPL2	8963	
BIREPL3	10693	
BIREPP	5157	
BIREPP1	4081	
BIREPP2	7121	
BIREPP3	5802	
BIREPQ	8167	
BIREPQ1	5077	
BIREPQ2	5299	
BIREPQ3	5568	
BIREPQ4	10246	
BIREPT	7495	
BIREPT1	4899	
BIREPT2	6677	
BIREPT3	4994	
BIREPT4	11125	
BIREPVP	5542	
BIRESTD	5233	
BIRPC	9334	
BIRPC1	6041	
BIRPC2	4026	
BIRPC3	9639	
1		

Routine (	Checksum
BIRPC4	9346
BIRPC5	3565
BIRPC6	3169
BISCAN	6447
BISELEC1	
	6000
BISELECT	10196
BISITE	2594
BISITE1	5253
BISITE2	12426
BISITE3	11301
BISITE4	9499
BITEST	1110
BITN	14730
BITN2	8465
BITRS	2385
BITX	441
BITXA	3411
BITXB	3318
BITXC	3594
BIUTL1	13839
BIUTL11	14909
BIUTL2	14395
BIUTL3	7156
BIUTL4	14454
BIUTL5	7346
BIUTL6	13783
BIUTL7	14951
BIUTL8	9410
BIUTLFIX	8264
BIVACED	5555
BIVACED1	5577
BIVGRP	3570
BIVGRP1	3354
BIVISIT	14230
BIVISIT1	8213

Routine	Checksum
BIVISIT2	4747
BIVT100	3352
BIVTAB	3640
BIW	3368
BIXCALL	8020
BIXRPC	5710

# 5.0 Sample Installation

```
Kernel Installation & Distribution System
          Edits and Distribution ...
          Utilities ...
          Installation ...
Select Kernel Installation & Distribution System Option: INstallation
        Load a Distribution
         Verify Checksums in Transport Global
        Print Transport Global
         Compare Transport Global to Current System
        Backup a Transport Global
         Install Package(s)
         Restart Install of Package(s)
         Unload a Distribution
Select Installation Option: LOad a Distribution
Enter a Host File: /usr/spool/uucppublic/bi__0850.k
KIDS Distribution saved on Aug 31, 2011@20:49:04
Comment: Immunization v8.5, 09/01/2011, CIM/ER/ Demo User
This Distribution contains Transport Globals for the following Package(s):
  IMMUNIZATION 8.5
Distribution OK!
Want to Continue with Load? YES//
Loading Distribution...
Build IMMUNIZATION 8.5 has an Environmental Check Routine
Want to RUN the Environment Check Routine? YES//
   IMMUNIZATION 8.5
Will first run the Environment Check Routine, BIENVCHK
Use INSTALL NAME: IMMUNIZATION 8.5 to install this Distribution.
        Load a Distribution
         Verify Checksums in Transport Global
        Print Transport Global
         Compare Transport Global to Current System
         Backup a Transport Global
         Install Package(s)
         Restart Install of Package(s)
         Unload a Distribution
Select Installation Option: install Package(s)
Select INSTALL NAME:
                       IMMUNIZATION 8.5
Loaded from Distribution 9/7/11@20:20:10
     => Immunization v8.5, 09/01/2011, CIM/ER/Mike Remillard ;Created on
Aua
This Distribution was loaded on Sep 07, 2011@20:20:10 with header of
```

```
Immunization v8.5, 09/01/2011, CIM/ER/Mike Remillard ; Created on Aug
31, 201
1@20:49:04
  It consisted of the following Install(s):
IMMUNIZATION 8.5
Checking Install for Package IMMUNIZATION 8.5
Will first run the Environment Check Routine, BIENVCHK
                          Hello, DEMO USER
                   Checking Environment for IMMUNIZATION v8.5
                  Need at least XU v8.0....XU v8.0 Present
                  Need at least DI v22.....DI v22.0 Present
                  Need at least BI v8.4....BI v8.4 Present
                                ENVIRONMENT OK.
Enter RETURN to continue or '^' to exit:
Install Questions for IMMUNIZATION 8.5
Incoming Files:
  9000010.11V IMMUNIZATION
Note: You already have the 'V IMMUNIZATION' 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.
   9002084.82BI TABLE ADD INFO ITEMS (including data)
Note: You already have the 'BI TABLE ADD INFO ITEMS' 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
Note: You already have the 'BI IMMUNIZATION TABLE HL7/CVX STANDARD' File.
   9002084.95BI TABLE NDC CODES (including data)
Note: You already have the 'BI TABLE NDC CODES' 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.
```

```
9999999.04IMM MANUFACTURER
Note: You already have the 'IMM MANUFACTURER' File.
   9999999.41IMMUNIZATION LOT
Note: You already have the 'IMMUNIZATION LOT' File.
Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES// NO
Want KIDS to INHIBIT LOGONs during the install? YES// NO
Enter the Device you want to print the Install messages.
Enter a '^' to abort the install.
DEVICE: HOME// Virtual
Install Started for IMMUNIZATION 8.5 :
              Sep 07, 2011@20:20:29
Build Distribution Date: Aug 31, 2011
 Installing Routines:
             Sep 07, 2011@20:20:31
Running Pre-Install Routine: ^BIPRE
 Installing Data Dictionaries:
              Sep 07, 2011@20:20:32
 Installing Data:
              Sep 07, 2011@20:20:32
 Installing PACKAGE COMPONENTS:
 Installing SECURITY KEY
 Installing FUNCTION
 Installing PRINT TEMPLATE
 Installing INPUT TEMPLATE
 Installing FORM
 Installing PROTOCOL
 Installing REMOTE PROCEDURE
 Installing LIST TEMPLATE
 Installing OPTION
              Sep 07, 2011@20:20:33
 Running Post-Install Routine: ^BIPOST
   Please hold....
```

```
Checking Lot Numbers for null Status...
    Done. 3 Lot Numbers have been fixed.
  Press ENTER/RETURN to continue or "^" to exit:
                                  * NOTE! *
        Do not forget to complete the Immserve part of the installation!!
                                  * NOTE! *
  Press ENTER/RETURN to continue or "^" to exit:
              - This concludes the Post-Initialization program. -
                            * CONGRATULATIONS! *
              You have successfully installed Immunization v8.5.
  Press ENTER/RETURN to continue or "^" to exit:
Updating Routine file...
Updating KIDS files...
IMMUNIZATION 8.5 Installed.
              Sep 07, 2011@20:20:49
Install Completed
```

Figure 5-1: Shows the screens that will display 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: <a href="http://www.ihs.gov/GeneralWeb/HelpCenter/Helpdesk/index.cfm">http://www.ihs.gov/GeneralWeb/HelpCenter/Helpdesk/index.cfm</a>

Email: <a href="mailto:support@ihs.gov">support@ihs.gov</a>