



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# Immunization Tracking System

(BI)

## User Manual

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## Preface

This manual describes the use of the Indian Health Service (IHS) Resource and Patient Management System (RPMS) Immunization Tracking System, version 8.3. This manual describes all processes and procedures involved in collecting and managing the immunization data of patients, and the specific steps involved to setup and customize the software.

The manual is designed to aid healthcare staff and computer personnel in the use of the latest version. While there is context-sensitive on-line help available at all prompts (by typing ?), this manual provides a more organized presentation of the features of the software.

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## 1.0 Introduction

### 1.1 Overview of the Immunization Tracking System

The Immunization Tracking System provides a means to track and recall patients for immunizations, to provide feedback to the providers and administrators about immunization rates in their patient population, and to share immunization information with authorized agencies.

Any patient whose immunizations are to be forecast must first be registered in the main patient database through the RPMS Patient Registration module. Immunization data for all registered patients is stored with all other patient medical information in the Patient Care Component (PCC) files.

Registered patients are automatically added to the Immunization registry as either Active or Inactive. Children over 36 months of age residing in GPRA communities for the facility are automatically activated. Other patients who are to be tracked for immunizations may be made active in the Immunization Registry, which is a subset of all registered patients. Active patients in the Immunization Register are those whose immunizations are tracked at the site. This allows healthcare staff to focus on Active patients (young children and other special needs patients) and to change patients to Inactive status if they move or go to another provider.

The RPMS Immunization Tracking System is composed of a Main Menu with three submenus, and options presented on each submenu. An option is selected by typing the name of the option or by typing the 3-character abbreviation that appears in the column to the left of the option name and then pressing Enter. Options on the submenus are grouped by the type of function they perform. Several screens also have actions at the bottom of the screen, which perform various operations on the information presented on the screen.

Not all options and actions are available to all users. Some options and actions require special knowledge or display confidential information. These options may be locked with keys that are given only to certain staff, such as the Program Manager. Therefore, not all options or actions described in this user manual may appear on your screen. If you have questions regarding locked options and actions, or questions in general regarding how to navigate through RPMS menus, please contact your Site Manager.

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 8.3 software replaces v8.21, v8.2, v8.1, v8.0, v7.1, v7.0, and v6.8.

## 1.2 New Features of Version 8.3

The following features are new to version 8.3, categorized by menu options.

### 1.2.1 Most Important New Features

- **New feature on Add/Edit Immunization Screen**

A new feature has been added to Add/Edit an Immunization screen that allows entering the Lot Number first (rather than vaccine). On immunization entry screen, skip directly to the Lot# field and select a Lot Number; the vaccine field populates automatically. This feature only works when adding a NEW immunization visit. For edits of previous visits, selection of Lot Number is limited to the existing Vaccine.

- **New Lot Inventory Display Options**

Several display options have been added to the Lot inventory display/report:

- By Unused Doses (least first)
- By Expiration Date
- By Lot Number
- By Vaccine Name, then by Unused Doses
- By Vaccine Name, then by Exp Date
- By Vaccine Name, then by Lot Number.

The display of Inactive Lot Numbers is now an option. By default, they are not displayed.

- **New Full-screen Editing of Vaccines and Lot Numbers**

New full screen capabilities for editing vaccines and lot numbers, with extensive pop-up screens for help and warnings. The screens present all of the information at once (rather than sequentially) and should be more intuitive for editing purposes.



- **Influenza Forecast for Ages 5-18 Years of Age**

Influenza vaccination can now be routinely forecast for patients 5 to 18 years of age and can only be forecast from September 15 through the end of March 15.

## 1.2.2 Patient Menu

- **New VFC Field**

A VFC (Vaccine For Children) eligibility option has been added to the Add/Edit Immunization Visit screen. Options are: Unknown, Not Eligible, Medicaid, Uninsured, Am Indian/AK Native, Federally Qualified, State-specific Elig, Local-specific Elig. If the patient's Beneficiary Type is American Indian/Alaskan Native, then this field defaults to AI/AN.

- **New Females Only parameter on Lists & Letters**

On the Lists & Letters screen, a new females only option has been added to the Patient Group parameter. This may be helpful in lists and letters relating to HPV.

- **Skin Test Reading in Millimeters No Longer Required for Historical**

On the PPD Skin test add/edit screen, a reading in mm is no longer required when entering a Result on immunizations with a Category of Historical Event.

- **New Prompt for Other Location**

A prompt now alerts users when they have entered more than the allotted 50 characters for Other Location while editing an Imm (or Skin Test) Visit. A pop-up message warns: Your Other Location Name will be shortened to 50 characters (rather than simply deleting the entire field).

- **New Health Care Facility Parameter**

The Lists & Letters Report has a new Health Care Facility Parameter, with default equal to user's logon site. This helps users on multi-facility machines to hone their lists and letters to patients registered at their own facility.

- **Age Display Reflects Forecast Date**

The display of the patient's Age on the Patient View Screen and in Lists & Letters has changed to reflect the patient's age on the Forecast Date chosen. In other words, if a forecast date other than today is selected, the patient's age can be recalculated and displayed to reflect the his/her age on the selected date.

- **Problem Fixed When Editing Outside Location**

When editing an Immunization visit, if the location changed from the user's default location to an Outside Location, the edit failed. This has been corrected.

### 1.2.3 Reports Menu

- **Beneficiary Type Defaults to Indian/Alaska Native**

For all reports the "Beneficiary Type" default is "Indian/Alaska Native" rather than "All".

- **New Combinations for Two-Year-Olds Report**

The Two-Year-Old report has been updated with 3 new combinations:

- 4DTaP 3polio 1MMR 3HepB 3Hib 1Var 4Pneumo
- 4DTaP 3IPV 1MMR 3Hib 3HepB 1Varicella 4pneumo 2HepA 3Rotavirus
- 4DTaP 3IPV 1MMR 3Hib 3HepB 1Varicella 4pneumo 2HepA 3Rotavirus 2Influenza.

- **New Influenza Report Added**

A new Pediatric Flu report for children, ages 6 – 23 months and 24– 59 months, has been added, which covers the influenza season in accordance with the national standard (9/1 – 12/31 of a given year).

- **Quarterly Report Name Change**

The name of Quarterly Report has been changed to the 3 - 27 Month Report.

- **New Help Messages on Add Lot Number Screen**

When a lot number is being added, the user is allowed to see all vaccines in the Vaccine Table. However, if an Inactive vaccine is selected, a message displays indicating that the vaccine must first be activated (on the Manager Menu) or that a different vaccine must be selected.

- **PPD Modifications**

The Vaccine Table software has been changed to permit PPD as a selection for contraindications. PPD is blocked, however, from being selected from Vaccine Table when entering new immunizations.

- **History of Chicken Pox in Adolescent Report**

The Adolescent Report has been improved to include patients with a history of Chicken Pox as equivalent to a first dose of Varicella vaccine. As a result, Hx of Chicken Pox now counts towards being up-to-date (or current) in the 1:3:2:1 combination (1-TD\_B, 3-HEPB, 2-MMR, 1-VAR or Hx of Chicken Pox).

## 1.2.4 Manager Menu

- **New Key for Lot Number Managers**

A new column has been added to the Key Holders screen to display who has the Lot Number Edit key. (The name of the key has been changed from BI LOT NUMBER NON-MANAGER to BIZ LOT ONLY to fit better in the column report). The capability of allocating/de-allocating the BIZ LOT ONLY Key has been added to the MGR Key Management program.

- **Help Regarding VFC Lots**

Help text has been added regarding VFC Lots. It suggests appending -vfc to VFC Lot Numbers. This helps solve the issue of one lot number being part VFC and part not VFC.

- **NOS Updates to Vaccine Table**

On the Vaccine Table, all NOS vaccines now have NOS appended to them as a standard form: 14:IG,NOS; 17: HIB,NOS ; 31: HEP AP,NOS; 45: HEP B,NOS; 82: ADENOV,NOS; 85: HEP A,NOS; 88: FLU,NOS; 89: POLIO,NOS; 90: RABIES,NOS; 91: TYPH,NOS; 2: VEE,NOS; 98:TST,NOS; 108: MENING,NOS; 109: PNEUMO,NOS; 112: TETTOX,NOS; 122: ROTA,NOS.

- **Better Error Logging Control**

A new system level parameter has been created to control the degree of error logging that takes place at the host file level. This helps to diagnose forecasting problems and also helps to limit the size of the immerror.log file.

- **Imm v8.3 now appears in the Top of All Screens**

The Immunization Package version number (e.g., Imm v8.3) now appears in the top left corner of all data entry screens and menus. This helps Tech Support staff in assisting users.

- **Lot Inventory Low Supply Alert Now Vaccine Specific**

The Lot Inventory Low Supply Alert is now specific and editable for each lot number. The Low Supply Alert Site Parameter now functions as an overall default value for lots that do not have a Low Supply Alert specific to them.

- **Update Vaccine Table and Manufacturers Table**

The Vaccine Table and Manufacturers Table have been updated with changes to CVX or MVX Codes made by CDC in recent months. A new vaccine: Kinrix, DTaP-IPV, CVX=130 has been added. Also a new manufacturer, Acambis, has been added to the Manufacturers table.

## 1.2.5 Other

- **New PEPs for EHR**

Two new Public Entry Points (PEPs) have been created for adding and deleting Contraindications: ADDCONT^BIRPC4, DELCONT^BIRPC4. These may be used by EHR in the future to permit adding and deleting contraindications via EHR.

- **Multiple CPT codes for CVX codes**

The ability to add multiple CPT codes for CVX codes has been added. This improves the import of CPT-coded visits (e.g. HepB CVX code 43 = CPT 90743 and 90746).

- **EHR now decrements the inventory of a Lot Number**

EHR does now automatically decrements the inventory of a Lot Number when immunizations are added through EHR..

- **Error with Lowercase e Fixed**

A system error would occur when a lot number contained a lowercase e followed by one or more numbers (interpreted internally as an exponential form). This has been corrected.

- **New VIS Default**

There is a new VIS Default date of 1/30/2008 for DTaP, Hib, IPV, HepB, PCV & rotavirus and any combinations of these, such as Comvax and Pediarix.

- **64-Bit Testing**

Further progress and testing has been conducted with Immserve 64-bit files for IHS sites running 64-bit environments for various operating systems, including AIX and Windows.

- **Local Active vs. Inactive Vaccine Setting Preserved**

The Active field for vaccines is no longer reset by the Restandardize function (Manger Menu). This change was made in order to preserve local site settings.

## 1.3 Case Managers and the Program Manager

A **Case Manager** is responsible for managing patients. This can include immunization tracking and recall, entering or editing patient data, selecting appropriate letters, scanning for delinquent needs, and more. Every patient in the RPMS Immunization Register should be assigned a Case Manager.

The **Program Manager** is the person chiefly responsible for the setup and operation of the RPMS Immunization Tracking System at a given site. This person works with the IT Site Manager on the technical aspects of the software, and performs maintenance tasks that require a more detailed understanding of the software than is required of Case Managers. At small sites, the Program Manager may also be the only Case Manager. (This individual is assigned the BIZ MANAGER Key by the Site Manager).

## 1.4 IMMServe Forecasting Program

The Indian Health Service has contracted with Medical Decision Associates, for use of their rule-based software, IMMServe, to evaluate immunization histories and determine due dates. IMMServe contains immunization logic for childhood and adult immunizations, except influenza and pneumovax (forecast by RPMS). It can be customized for different immunization schedules. IMMServe can be refined as immunization logic evolves or new vaccines and vaccine combinations are added. For additional information, see Appendix C: IMMServe.

## 2.0 System Navigation

### 2.1 Standards and Conventions

The Resource and Patient Management System (RPMS) has established certain terms and operating procedures (conventions) for the Immunization Tracking System. The following is a brief discussion on those conventions. As you read the following explanations, refer to your keyboard to ensure that you correctly identify each key and command function.

#### 2.1.1 Keyboard Entry

The keyboard has two main sections:

- The left section of the keyboard resembles a keyboard with the addition of several special keys and symbols. It is this section and its special keys that you will use.
- The right section contains a keyboard similar to a 10-key adding machine.

When entering numbers, you may use either the numeric keypad on the right side of the keyboard or the numeric keys on keyboard.

If you type an incorrect response, the system beeps to alert you to the error. A message following the beep displays the type of error, and a second message requests the correct information.

#### 2.1.2 Use Capital Letters Only

When entering data onto the system, make sure you type all letters and words in CAPITAL LETTERS.

Set up your terminal to type only capital letters, by pressing the Caps Lock key to limit entries to capital letter. When the Caps Lock is on, the word *lock* appears at the top of the screen.

**Note:** The Caps Lock key has no effect on the numeric keys.

## 2.1.3 Key Usage

### **Enter (Return) Key**

Press the Enter key to indicate the end of an entry, such as a number or a word. Press the Enter key each time you respond to a prompt. To return to the previous menu screen, simply press the Enter key.

### **Backspace Key**

Use the Backspace key to move the cursor to the left, deleting characters as you backspace.

### **Arrow Keys**

The Up and Down arrow keys move you up and down fields. Generally, the Left and Right arrow keys are not used. If you are having problems with these keys, check with your Site Manager.

### **Caret ( ^ )**

Use the caret (^), also known as the “up-hat,” a special control character, to exit from a particular activity or data entry sequence. Typing the caret at any prompt will usually take you back to the preceding prompt or menu level. You can also use the caret to exit from long data displays such as vendor lists that usually involve many screens.

To use caret, press the Shift key and the number 6 key (Shift+6) on the keyboard.

### **Special Delete Character ( @ )**

Use the “at” symbol (@) to delete an existing entry in a file. After selecting the record you want to delete or positioning the cursor at a specific field you want to delete, type the @ symbol.

To use the @ symbol, press the Shift key and the number 2 key (Shift+2) on the keyboard.

Note that the system prohibits deletion of certain records or deletion of data contained in certain fields.

### 2.1.4 Double Slash (//)

Frequently, the software displays a prompt and a default response, which is followed by two slashes (//). Pressing Enter here, selects the default.

If you do not want to accept a default response, simply type your response and then press Enter. If a prompt has a default, but you want the answer to be blank, you can leave an answer blank by deleting the default or typing @ at the default prompt.

### 2.1.5 Screen Output Examples

Many screen output examples include user responses to prompts, where **bolded** text indicates a user response, and <**Enter**> indicates the Enter key; for example,

```

IMMUNIZATION v8.3                *   PATIENT MENU   *           Site: DEMO MED CTR
                                =====           User:  USER,MARTHA

SGL  Single Patient Record
LET  Print Individual Patient Letter
LLS  Patient Lists and Letters

Select Patient Menu Option: PAT <Enter> Patient Immunization Record

```

### 2.1.6 Select Device Prompt

Whenever the software is about to display a list or report, it displays the “Select Device” prompt.

- To send the report or list to a printer, enter the printer name or number.
- To display the report or list on your screen, type HOME (or 0).

For help in answering the Select Device prompt, contact your Site Manager.

Some reports allow you to type Q (for Queue) at the Device prompt. This enables you to send a report to a printer, and then returns you immediately to your screen while the report is printing, rather than waiting for the report to finish before returning you to your screen. This is helpful if the report takes a long time to run (search) or print. After typing Q, the system displays the “Queue To Print On Device” prompt. At this point, enter the name of the printer on which you want to print the report.



### 2.1.7 On-line Help

Special help displays are available for most menu options and data entry prompts. Typing ? at the “Select . . . Option” prompt displays information related to the current option, where

Typing . . .	Displays . . .
one question mark (?)	a list of all options accessible from the current option.
two question marks (??)	a list of all accessible options and their formal names
Three question marks (???)	a brief description for each option in a menu.
a single question mark (?) followed by an option name	extended help, if available, for that option

## 2.2 ListMan Screen Displays

The RPMS Immunization Tracking System makes extensive use of ListMan screens to display information and to provide a means of taking various actions on the information presented. Figure 3-4 shows a typical ListMan screen display.

```

PATIENT VIEW (IMM v8.3)          Sep 15, 1998 16:52:30          Page: 1 of 2
Patient: DEMO,PATIENT          DOB: 01-May-1998 4 months)
Chart#: 00-00-54 at UNSPEC MED CTR  Inactive      Female      M HBsAg: UNK

#  Immunization History
1  03/27/03  DTaP (PEDIARIX)      unsp      |      Immunizations DUE on 01/27/2004
                |      Td-ADULT      past due
2  03/27/03  IPV (PEDIARIX)      unsp      |      Last Letter: None
3  03/27/03  HEP B PED (PEDIARIX) unsp
4  11/17/03  *VARICELLA              unsp      |
                |      -INVALID--EXPIRED-
+
+      Scroll down to view more. Type ?? or Q to QUIT.
A  Add an Immunization          D  Delete a Visit          P  Patient Edit
S  Skin Test Add                I  ImmServe Profile        C  Contraindications
E  Edit a Visit                  H  Health Summary          L  Letter Print

Select Action: Next Screen//
    
```

Figure2-1: ListMan screen

ListMan screen displays include three areas:

1. **Header Area**

The header area is a fixed (non-scrollable) area that displays the Screen Title and Patient Demographic Information (e.g., lines beginning with Patient and Chart).

2. **List Area**

This area scrolls (with the Up or Down Arrow keys) if all items do not fit on one page. It displays a list of items, such as Immunizations or Date of Forecast on which you can take action. If there is more than one page of items, the page number is listed in the upper right-hand corner of the screen (Page 1 of #).

3. **Action Area**

This screen section contains three elements - Message Line, Actions, and Action Prompt.

- **Message Line:** This line displays a plus (+) sign, a minus (-) sign, a string of periods (...), or an informational statement (e.g., Enter ?? for more actions). If you enter a plus sign at the action prompt, the display moves forward a page. If you enter a minus sign at the action prompt, the display moves back a screen. The plus, minus, and > signs are only valid actions if they are displayed on this message line.
- **Actions:** This section contains a list of actions. If a double question mark (??) is entered at the Select Action: prompt, a hidden list of additional actions is displayed.
- **Action Prompt:** At the Select Action: prompt, type the name or abbreviation of options and press the Return key to perform any of the following actions:
  - Browse through the list
  - Select items that need action
  - Take action against those items
  - Select other actions without leaving the option

## 2.2.1 Generic Actions

In addition to the Actions specific to the ListMan screen, the system provides generic actions applicable to all ListMan screens. To view these generic actions, enter a double question mark (??) at the Select Action: prompt.

The following table shows each Action, its corresponding abbreviation in brackets [ ], and a description of what it does.

**Table 2-1: ListMan Generic Actions and Descriptions**

Action	Description
Next Screen [+]	Move to the next screen (may be shown as a default)
Previous Screen[-]	Move to the previous screen
Up a Line [UP]	Move up one line
Down a Line [DN]	Move down one line
Shift View to Right [>]	Move the screen to the right if the screen width is more than 80 characters
Shift View to Left [<]	Move the screen to the left if the screen width is more than 80 characters
First Screen [FS]	Move to the first screen
Last Screen [LS]	Move to the last screen
Go to Page [GO]	Move to any selected page in the list
Re Display Screen [RD]	Redisplay the current screen
Print Screen [PS]	Prints header and portion of the list currently displayed
Print List [PL]	Prints the list of entries currently displayed
Search List [SL]	Finds selected text in list of entries
Auto Display (On/Off) [ADPL]	Toggles the menu of actions to be displayed/not displayed automatically
Quit	Exits the screen (may to shown as a default)

## 2.3 ScreenMan Displays

RPMS Immunization Tracking System makes extensive use of ScreenMan to allow the editing of data relating to patients and their immunizations, skin tests, contraindications, and such.

Similar to ListMan, ScreenMan displays header information in the top third of the screen, editable information in the middle third of the screen, and commands and help in the bottom third of the screen.

Figure 2-2 shows a sample of a ScreenMan display.

```

* * * ADD/EDIT IMMUNIZATION VISIT * * *

Patient: DOE, FLORENCE                DOB: 05-Oct-1997 (20 months)
Chart#: 00-00-04 at UNSPEC MED CTR    Inactive      Female

-----
Date: MAR 27, 2003                    Category: Ambulatory
Vaccine: DTaP-Hep B-IPV                Lot#:
Inj Site:                               Vol:      ml
Location Type: IHS                      Location: UNSPEC MED CTR
Provider:                               Reaction:
VIS Date:                               Dose Override:

Exit      Save      Refresh
Enter a command or '^' followed by a caption to jump to a specific field.
COMMAND:                                     Press <PF1>H for help

```

Figure 2-2 ScreenMan example

### ScreenMan Tips

- Context sensitive help (messages relating to the particular prompt/question at which your cursor is resting) is automatically displayed in the bottom third of the screen. Type ? at any prompt to display more help at the bottom of the screen.
- In general, it is most efficient to press the Return key to move from one prompt to the next; however, you may move around the screen using the cursor keys.
- The key combination PF1-E allows you to exit and save your data from any point on the screen without moving to the Command Line at the bottom. That is the most efficient method of exiting ScreenMan screens. (PF1-E means you press and hold the PF1 key and then press the E key.) PF1-Q allows you to exit *without* saving your work.

**Note:** PF1 refers to the PF keys on a computer terminal. If you are using a PC, then simply substitute the F1 key in place of the PF1 key. See your Site Manager for support with this.



- MGR - Manager Menu

The options on this menu enable Case Managers and Program Managers to add/edit Form letters, edit sit parameters, re-standardize the Vaccine table, and export immunizations in ASCII format files. This locked menu is available only to those who hold the Manager Key. For information and instructions on using Manager Menu options, see Section, 6.0, “Manager Menu (MGR).”

### 3.1 Immunization Menu Diagram



Figure 3-2: Diagram of Immunization menus and menu options

## 4.0 Patient Menu (PAT)

The Immunization Patient Menu provides access to the basic tracking and recall functions of the Immunization software. The Patient Menu has three options for managing immunization information for patients:

- The **Single Patient Record** option, enables you to
  - Activate or inactivate a patient from the Immunization Register
  - Enter, edit, or delete current or historical immunizations or skin tests
  - Enter, edit, or delete immunization adverse events or contraindications
  - View a more complete immunization history and future forecast (IMMServe Profile)
  - Print a Health Summary or Official Immunization Record of a patient
  - Print a Due Letter
- The **Print Individual Patient Letter** option enables you to view and print any of the customized letters (including the Official Immunization Record) that have been set up for a patient at your site.
- The **Patient Lists and Letters** option enables you to select various groups of patients by Age Range, Active Status, Community, Immunizations Received, Lot Numbers, and more. You can also print either a master list of the group of patients or send a selected letter to the group of patients.

### To use Immunization Patient Menu options:

1. Access the Immunization Menu from the RPMS Main Menu.
2. At the “Select Immunization Menu Option” prompt, type **PAT**.

The system displays the Patient Menu; for example,

```

IMMUNIZATION v8.3                *  PATIENT MENU  *                Site: DEMO MED CTR
                                =====                User: USER,MARTHA

SGL  Single Patient Record
LET  Print Individual Patient Letter
LLS  Patient Lists and Letters

Select Patient Menu Option:

```

Figure 4-1: Immunization Patient Menu

For information and instructions on using the

- Single Patient Record option, see Section 4.1, “Single Patient Record (SGL).”
- Print Individual Patient Letter option, see Section 4.2, “Print Individual Patient Letter (LET).”
- Patient Lists and Letters option, see Section 4.3, “Patient Lists and Letters (LLS).”

## 4.1 Single Patient Record (SGL)

The Single Patient Record (SGL) option enables you to view the immunization history of an individual patient and perform any of the following functions for that patient:

- Add or edit immunizations
- Add or edit skin tests and results
- Delete wrong immunization information
- Update contraindications, refusals, or history of chicken pox
- Update patient registration information
- View a health summary (including immunization health summary)
- Print a due letter and Official Immunization Histories
- View the immunization profile for any patient in the Immunization register



**To select a single patient record:**

1. At the “Select Patient Menu Option” prompt, type SGL.
2. At the “Select Patient Name” prompt, type the patient’s name, chart number, or DOB.

```

PATIENT VIEW (IMM v8.3)           Jan 31, 2004 18:28:51           Page: 1 of 3
Patient: DEMO,PATIENT             DOB: 01-May-1998 (4 months)
Chart#: 00-00-54 at UNSPEC MED CTR Inactive Female M HBsAg: UNK

# Immunization History           | Immunizations DUE on 15-2ep-1998
1 02/15/03 PEDVAXHIB             UNSP | DTaP           past due
2 05/05/03 *PEDVAXHIB           UNSP | IPV            past due
   -INVALID--DEFECTIVE-         | PNEUM-CONJ    past due
   (Arthritis or Arthralgias)   | INFLUENZA     due
3 05/29/03 PEDVAXHIB (COMVAX)   UNSP |
4 09/05/03 PEDVAXHIB (COMVAX)   UNSP | Last Letter: None
5 02/16/03 HEP B PED             UNSP | -----
6 05/07/03 *HEP B PED           UNSP | * CONTRAINDICATIONS/REFUSALS *
                                     HIBTITER:Anaphylaxis

ADDITIONAL PATIENT INFORMATION
-----
Case Manager.....: AVRITT,RALPH
Next Appointment   : 01/04/04

+ Scroll down to view more. Type ?? or Q to QUIT.
A Add an Immunization      D Delete a Visit      P Patient Edit
S Skin Test Add            I ImmServe Profile    C Contraindications
E Edit a Visit             H Health Summary      L Letter Print

Select Action: Next Screen//
    
```

Figure 4-2: Patient immunization record screen

**Considerations**

- All patients called up under the Single Patient Record option are automatically added to the Immunization Register, if they are not already listed in it.
  - If the patient is over 18 years or if the user/clerk does not have the BIZ EDIT PATIENTS Key, then the patient is added with a status of Inactive and a reason of Never Activated.
  - If the patient is 18 years of age or younger, and the user/clerk has the BIZ EDIT PATIENTS Key, then the user/clerk is prompted to select a status.
  - If the patient is already in the Register and has a status of Inactive but is less than 36 months old, then user or clerk (if they have the BIZ EDIT PATIENTS Key) is prompted to change the patient’s status to Active.
  - If the patient is deceased, he or she is automatically added with a status of Inactive and a reason of Never Activated.

- The line at the bottom of the Additional Patient Information section displaying Next Appointment only appears if your site is running the RPMS scheduling package and if the patient has a future appointment.
- Patient ages throughout this module are determined by a count of months or years, just as birthdays are counted. That is, a patient is not 3 months old until the same date in the third month, regardless of how many days are in the intervening months.
- If a patient is recorded as deceased in the RPMS Patient Registration module, this is displayed. Letters do not print for patients who are deceased.
- At the Select Action: prompt on most of the ListMan screens, you can type ?? to view the list of hidden actions. For a description of actions, see Section 2.2.1, Generic Actions.

#### 4.1.1 Add an Immunization (A)

Use the **Add Immunization** action to enter new or historical immunizations into RPMS, regardless of whether the patient is a child or adult, inactive or active, registered or not registered.

```

* * * ADD IMMUNIZATION VISIT * * *
Patient: DOE,JOHN          DOB: 04-Feb-1976 (28 yrs)
Chart#: 00-00-05 at UNSPEC MED CTR      Active      Male
-----
Date: FEB 2,2004          Category: Ambulatory
Vaccine: HIB (PRP-OMP)          Lot#: 123456
          (PEDVAXHIB)
Inj Site: Left Thigh IM      Vol:.5 ml
Location Type: IHS          Location: UNSPEC MED CTR
Provider: DOCTOR,NURSE
VIS Date: DEC 16,1998
VFC Elig: Am Indian/AK Native
-----
Exit      Save      Refresh
Enter a command or '^' followed by a caption to jump to a specific field.
COMMAND:          Press <PF1>H for help      Insert

```

Figure 4-3: Add/Edit Immunization Visit screen

**Note:** The RPMS Immunization package is designed to include all the information required to be documented when immunizations are given. Each site that chooses to do direct data entry should require that all fields be completed.

Combination vaccines can be entered by name; for example, Comvax<sup>®</sup> or Pediarix<sup>™</sup>. There are no dose numbers. The site, route, and amount can be recorded in RPMS.

### Adding the Lot Number before the Vaccine

If you select a vaccine first, your choice of lot numbers is limited to those that apply to that particular vaccine. Now, when adding a new immunization visit, you may enter the lot number first, rather than selecting the vaccine first. For some, this may be more efficient and help avoid errors caused by selecting the wrong vaccine and being unable to find the correct lot number.

To enter the lot number first, press Enter at the vaccine field, without making a vaccine selection; the cursor moves to the lot number field.

The Immunization Fields and Responses by Visit Category table (Table 4-1) shows the entries to fields by the following Visit Categories:

- **Ambulatory** refers to outpatient or clinic visits (as opposed to inpatient) that occurred at the clinic or hospital where the Immunization software is being used.
- **Historical** refers to immunizations given at other facilities (not the current facility where the software is being run) and to visits that occurred in the past and of which not many details are known. This is offered in order to complete a patient's immunization history as much as possible, while recognizing that all of the information may not be available. If a date other than today is entered, the category automatically defaults to Historical. If indeed an Ambulatory visit is being entered belatedly, the category can be changed back to Ambulatory.

**Note:** Ordinarily, when entering immunizations and the category is Ambulatory, only the current Active vaccines are available for selection (as determined by the Manager under the Vaccine Table Edit option). However, when the category is Historical, all vaccines, both Active and Inactive, are available, to allow entering a complete history.

**CAUTION:** Care should be taken when entering Ambulatory immunizations at the current facility a day or more later than the actual visit. If the date is other than today, the category automatically defaults to Historical and many Inactive (and inappropriate) vaccines are available for selection. Designating a visit as Historical relaxes many safeguards put in place for complete and accurate data entry (checks for Active vaccines, Lot Number requirements, duplicate visit checks, and so on.).

If the immunization being entered is not truly Historical, but merely an Ambulatory visit being entered a day or two late, then it is very important to change the Category back to Ambulatory. This helps to ensure accurate data entry and avoid difficulties and confusion later.

- **Inpatient** refers to those immunizations given while a patient is admitted to the current hospital/facility, where the software is in use.

**Table 4-1 Immunization Fields and Responses by Visit Category**

Field	Ambulatory	Historical	Inpatient
<b>Date</b>	Today's date – the default	Enter the date of the immunization	Today's date – the default
<b>Vaccine</b>	Enter vaccine name – can use name of combination – Comvax® or Pediarix®	Enter vaccine name – can use name of combination – Comvax® or Pediarix®	Enter vaccine name – can use name of combination – Comvax® or Pediarix®
<b>Lot #</b>	Enter the Lot # on the vial. Remaining doses and Expiration date will automatically appear	Leave blank as unknown	Enter the Lot # on the vial
<b>Injection Site</b>	Enter site	Leave blank as unknown	Enter site
<b>Volume</b>	Accept default unless different	Delete the default - @ sign	Accept default unless different
<b>Location Type</b>	Accept default (IHS)	Accept default (IHS) or change to other (O) if not an IHS location	Accept default (IHS)
<b>Location</b>	Accept default – your facility	Enter location immunization given	Accept default – your facility
<b>Provider</b>	Accept default – change if person entering not the same as person who gave immunization	Delete default - @ sign (shift 2)	Accept default – change if person entering not the same as person who gave immunization
<b>VIS Date</b>	Accept default	Delete default - @ sign (shift 2)	Accept default
<b>VFC Elig</b>	Accept default or change value as appropriate	Accept default or change value as appropriate	Accept default or change value as appropriate
<b>Category</b>	Accept default - Ambulatory	Accept default – Historical	Change to Inpatient

## Shortcut Keys

- To exit and save, press F1 and then E.
- To exit and not save, press F1 and then Q.
- To delete a specific entry, type @.
- To accept the last IHS location entered if different than the default, press the spacebar and then the press Enter.

## Lot Number

The manager sets a default lot number for each vaccine in the Manager Menu, and chooses whether to make Lot Number required or optional (see Section 6.8, “Lot Number Add/Edit (LOT)”).

If you select a duplicate lot number, one of the following messages appears, depending on whether t you hold a Manager level security key:

- For users who do not hold the BIZ MANAGER Key

You have selected a Duplicate Lot Number. This means that the lot number exists at least one other time in the lot number file, and the Immunization Visit you are entering cannot be stored until the duplicate has been resolved.

Only a person with access to the Immunization Manager's menu can resolve duplicate lot numbers. Since you do not have this access, you should contact your Immunization Program Manager or your Computer Site Manager for support with this problem. In the meantime, you may finish entering the Immunization Visit without a lot number, and add the lot number to this visit after the duplicate has been resolved. Or you can quit without adding the visit at this time.

- For users who hold the BIZ MANAGER Key

You have selected a Duplicate Lot Number. This means that the lot number already exists in the lot number file, and the Immunization Visit you are entering cannot be stored until the duplicate has been resolved. Refer to the Lot Number Add/Edit option on the Manager Menu for resolution of duplicate lot numbers.

## Location Type

Location Type is used to designate whether a location is IHS (any location that has a recognized IHS Facility Location Code), or OTHER (unofficial locations, such as private doctors without an IHS Facility Location Code). All OTHER locations point to one Location Code which is set in Section 6.4.

**Location**

If the location is an official IHS location, you must enter the correct code. If you chose OTHER for Location Type, you may use non-official locations (e.g., Dr. Ray Beck).

**Reaction**

Choose from the following list:

- Anaphylaxis or Collapse (Contraindicates next dose)
- Arthritis or Arthralgias
- Convulsions
- Fever>104
- Lethargy
- Swelling>4cm

**Vaccine Information Statement (VIS) Date**

Each provider is required to give a parent/patient a Vaccine Information Statement (VIS) for each vaccine administered and document the Date of Publication as evidence of Informed Consent. You can set a default VIS date in the Vaccine Table Edit option, (see Section 6.9).

**Vaccines For Children Eligibility (VFC)**

The Vaccines For Children Eligibility (VFC Elig) field provides eight options for recording the patient's VFC eligibility: Unknown, Not Eligible, Medicaid, Uninsured, Am Indian/AK Native, Federally Qualified, State-specific Elig, Local-specific Elig. If the patient's RPMS Registration Beneficiary Type is 01 (American Indian/Alaska Native), this value appears as the default in the VFC Elig field.

### 4.1.2 Skin Test Add (S)

Use the Skin Test Add (S) action to add or edit new or historical skin tests (PPD, Monovac, Tine) and the results of the skin tests. Adding skin test information is similar to adding immunization data for a selected patient.

```

          * * * ADD/EDIT SKIN TEST VISIT * * *
Patient: DEMO, PATIENT                DOB: 16-Mar-1999 (6 months)
Chart#: 00-00-99 at UNSPEC MED CTR      Active      Male
      Date: FEB 15,2003                  Category: Ambulatory
Skin Test: CHLAMYDIA                    Site: LEFT FOREARM   Volume: .1 ml
Result: NEGATIVE                        Reading: 13mm    Date of Reading:
Location Type: IHS                      Location: UNSPEC MED CTR
Skin Test Provider:
Skin Test Reader:
COMMAND                                Press <PF1>H for help   Insert

```

Figure 4-4: Add/edit immunization visit

Use the procedure outlined in Section 4.1.1. Add Immunization (A) to add a skin test. To display a list of skin tests type ?? at the Skin Test: prompt. The result of the skin test is either positive or negative. The reading is the induration in mm (e.g., 0, 02, or 12mm). Identify the skin test provider and reader.

### 4.1.3 Edit a Visit (E)

With this action on the Patient View screen you can change wrong vaccine or skin test information in RPMS, including wrong dates, vaccine, and so on. The screens and actions are identical to those described in Section 4.1.1 Add an Immunization (A), except you have two additional choices when editing a vaccine, as shown in the following table.

**Table 4-2 Additional Edit Vaccine Fields and Responses by Visit Category**

Field	Ambulatory	Historical	Inpatient
<b>Reaction</b>	Type ?? to see choices – enter if there was a reaction to a vaccine.	Leave blank – will probably not know on historical – enter if known.	Type ?? to see choices – enter if there was a reaction to a vaccine.
<b>Dose Over-ride*</b>	Use to force a dose valid (if given a day or so early but won't affect school) or invalid (due to expired vaccine, etc). Type ?? to see choices. Use only with provider approval.	Use to force a dose valid (if given a day or so too early but won't affect school) or invalid (due to expired vaccine, etc). Type ?? to see choices. Use only with provider approval.	Use to force a dose valid (if given a day or so too early but won't affect school) or invalid (due to expired vaccine, etc). Type ?? to see choices. Use only with provider approval.

**Note:** Using dose over-ride affects the forecasting; it will ignore invalid doses and will count forced valid doses.

### 4.1.4 Delete a Visit (D)

Use the Delete a Visit (D) action to delete a complete immunization visit or a skin test that was erroneously entered (e.g., a duplicate immunization record). The following screen display shows an example of the delete confirmation screen, which appears after you have selected a visit to delete:

```

Immunization v8.3                *  DELETE AN IMMUNIZATION VISIT  *
Do you really wish to DELETE this Visit?
Patient: DOE,DIANA                Chart#: 99977
26-Mar-1999 @12:00 COCCI   Negative  2 mm   Dr. Black
Enter Yes or No? NO//
    
```

Figure 4-5: Delete an immunization visit screen



### 4.1.5 ImmServe Profile (I)

Use the ImmServe Profile (I) action to view an in-depth immunization forecast for any patient in the Immunization Register, including explanations of errors in the Immunization History (e.g., DTaP 1 because it was given before 42 days of life). Refer to the Package Information (PKG) option on the Manager Menu or to Appendix C: IMMserve for more information about IMMserve forecasting.

Figure 4-6 provides an example of the ImmServe Profile screen.

```

Patient:PATIENT, JANE                                DOB: 27-APR-1998 (7m)
Chart#:11-11-70 at UNSPEC MED CTR                    Active      Female
-----
ImmServe (Release 5.1, Rule Set 3.0, Version: IHS_9gm18)
  Case run Fri Oct 9 09:11:47 2008
INDIAN HEALTH SERVICE Report biwin3201
Requested Numbered Doses Processing Method: HIGHEST NUMBERED DOSE
Requested Series Forecasting: HepB DTP Td/B Hib OPV/IPV MMR/Me
  HepA Var
Series Forecasted: HepB DTP Td/B Hib OPV/IPV MMR/Me HepA VAR
Requested Series Failure Modes: None.
-----
Case: DOE, JANE                                     Chart#: 10-45-60
Date used for forecast: 10/9/98
Date of birth: 4/27/1998
Contraindicated vaccines: Varicella (Hx of chicken Pox)
Other facts: Mother HBsAg status unknown

DtaP 1: 6/6/1998 HbOC 1: 6/6/1998
The following immunizations are due on 10/9/98
  HepB 1 (past due)
  DtaP 2 (past due)
  HbOC 2 (past due)
  Polio 1 (past due)
The following immunizations will be due:
  HepB 2, on or after 11/9/1998
  DtaP 3, on or after 12/9/1998
  HbOC 3, on or after 12/9/1998
  Polio 2, on or after 12/9/1998
The following vaccine series are either complete or no longer relevant for this
case:
  Hib          VAR

```

Figure 4-6: Example of the ImmServe Profile screen display

### 4.1.6 Health Summary (H)

Use the Health Summary (H) action to view or print a health summary for the selected patient. You can select from a number of health summaries including Immunization, Adult Regular, Cancer, CHR, Dental, Diabetes Standard, Mental Health/Social Services, Patient Merge (Complete), Pediatric, Problem List, and Sample. Figure 4-7 shows a sample Health Summary screen.

```

***** CONFIDENTIAL PATIENT INFORMATION -- APR 14,1999  8:36 AM  [JEC]
***** DOE,PATIENT #99999  (IMMUNIZATION SUMMARY)  pg. 1  *****
DOE,PATIENT      DOB: AUG 8,1982                                INDIAN HOSP.
HEALTH RECORD NUMBER: 99906
5 PALM DR, MYTOWN, NM  87999
----- IMMUNIZATIONS -----
IMMUNIZATION FORECAST:
  HEP B                past due

      DTP                03/07/91  18 mths UNSPEC Med Ctr
      DTP                04/07/95   5 yrs  UNSPEC Med Ctr
      Td-ADULT           08/09/02  12 yrs  UNSPEC Med Ctr          U0520AA
+   Enter ?? for more actions                                >>>
+   NEXT SCREEN        -   PREVIOUS SCREEN          Q   QUIT
Select Action: +//

```

Figure 4-7: Example of a Health summary screen display

### 4.1.7 Patient Edit (P)

Use the Patient Edit (P) action to edit the following information for a selected patient:

- Change a patient status in the Active Immunization register to Inactive.
- Add or edit a case manager.
- Edit Mother's HBsAg status.
- Forecast Influenza/Pneumonia or Disregard forecast based on Risk Factors.
- Add the name of a parent or guardian for due letters.

```
      * * * EDIT PATIENT CASE DATA * * *  
Patient Name: PATIENT,PATIENT (46 years)           Chart#: 99999  
  Street: 123 ANYWHERE                           Patient Phone: Unknown  
  City/St/Zip: ANYWHERE, AK 99503  
  
(The above data may be edited through Patient Registration)  
  Case Manager: YOUR NAME  
  Parent/Guardian:  
  Other info:  
  Inactive Date: 12/21/98  Inactive Reason: Moved Elsewhere  
  Moved to/Tx Elsewhere: Free text may be entered here.  
  
  Forecast Influ/Pneumo: Both  
  Mother's HBSAg Status: Unknown  
  
COMMAND:           Press <PF1>H for help           Insert
```

Figure 4-8: Patient Edit screen display

#### 4.1.7.1 Inactivating a Patient

To inactivate a patient, you must select a date of inactivation, and select a reason for inactivation from a drop down menu. Reasons include:

- Moved elsewhere
- Treatment elsewhere
- Deceased
- Ineligible

##### **Moved to/Treatment Elsewhere**

Add free text for the location where the patient moved or provider/facility name where the patient is getting care. Patients who were inactivated prior to Immunization v8.3 have previously inactivated or never activated in the reason for inactivation field.

### Considerations

- Entering a date in the Inactive field flags the patient as Inactive as of that date. Several reports and letters allow the user to specify whether to include Inactive patients or only Active patients.

**Note:** If the patient is inactivated in the RPMS Patient Registration package, it is not possible to select and edit the patient in the Immunization package (for the given site). This can lead to a problem wherein a patient counts as delinquent for immunizations, but cannot be edited or even inactivated in the Immunization package. Therefore, it is important to inactivate the patient in the Immunization package first and then inactivate the patient in the Patient Registration package.

- If the Parent/Guardian field is left blank, the due letters are addressed to Parent/Guardian of followed by the patient name.
- Use the Forecast Influenza/Pneumo field to add the patient to the group that is forecast for Influenza every year between September 1 and March 31 and/or forecast for Pneumo. Select whether Normal (0), Influenza (1), Pneumococcal (2), or Both (3) vaccines should be forecasted for this patient. Leave it blank or enter Normal to forecast these vaccines only in later life (>65yrs). You may also select (4) Disregard Risk Factors in order to prevent this patient from being forecast for Influenza and Pneumo due to previous High Risk diagnoses in their record.
- If you enter HBsAg positive, this status shows up each time you view the Patient's Immunization Record on the Patient View screen.

#### 4.1.8 Contraindications (C)

Use the Contraindications (C) action to add or delete contraindications for specific vaccines. Table 4-3 shows the reasons for contraindication.

**Table 4-3: Reasons for Contraindication**

Anaphylaxis	Immune Deficient
Carrier (e.g. HBsAg Carrier)	Lethargy/Hypotonic Episode
Convulsion	Neomycin Allergy
Egg Allergy	Parent Refusal
Fever > 104	Patient Refusal
Hx of Chicken Pox	Persistent Crying
Immune	Positive TB Skin Test (PPD only)
Immune Deficiency	Vaccine Unavailable

The following screen output example shows the Patient Contraindication screen, the point from which you add or delete the patient's contraindications.

```

CONTRAINED (IMM v8.3)           Apr 16, 1999 16:04:36           Page: 1 of 1
Patient: DOE,PATIENT           DOB: 23-Jan-53 (46 years)
Chart#: 99999 at UNSPEC MED CTR   Active   Female

#   Vaccine           Reason                               Date Noted
1   VARICELLA:       Hx of Chicken Pox                   10-Dec-1998

Enter ?? for more actions.
A Add Contraindication           E Explanation
D Delete Contraindication

Select Action: Quit//

```

Figure 4-9: Contraindications screen

- The top area of the screen lists the patient's demographic information, most of which is edited through the RPMS Patient Registration.
- The middle area of the screen lists any Contraindications to vaccines that the patient may have, along with the reason for the contraindication and the date it was noted.
- The bottom area of the screen provides the actions to add or delete Contraindications, or to view this explanation.

Contraindications added for the patient here cause the contraindicated vaccine to be eliminated from the forecast (in the right column of the main Patient View screen). However, if the reason chosen for a Contraindication is Patient Refusal, the vaccine is not eliminated from the forecast. If you choose Immune Deficiency, then MMR, Varicella, OPV, and Flu-Nasal (all live vaccines) are automatically contraindicated.

**Note:** You may select TST-PPD INTRADERMAL (PPD) as the vaccine. In this case, the only reason selectable is Positive TB Skin Test. This allows the system to display a contraindication to future PPD tests.

### 4.1.9 Letter Print (L)

Use the Letter Print (L) action to print any form letter (Due Letter, Official Immunization Record, etc.) for the selected patient. The form letters are set up by the Site Manager. There should be at least one Standard Due Letter and one Official Immunization Record. At the prompt, type the name of the letter or ? to select from a list of form letters.

```
DEMO Clinic
123 MAIN
Anywhere, Alaska 12345
(123) 456-7890
30-Mar-1999
Date of Birth: 01-Jan-1900 (6 Months)   Chart#: 99960
Parent/Guardian of

DEMO PATIENT
100 5TH ST.
Anywhere, Alaska 12345

Dear Parent or Guardian:

Your child, DEMO, is due for immunizations. According to our records, the following
immunizations have already been received:

CARLA will be due for the immunizations listed below:

    HEP B
    Td-ADULT

If you feel our records are not correct, please notify us so that we may make the
corrections to update our records. Otherwise, please come to our clinic.
We would surely appreciate you bringing your own personal immunization records so
that we can update our records as well as your records!

23-April-1999 at UNSPECIFIED MEDICAL CENTER

Sincerely,

Dr. ADAM ADAM

Printed: 30-Mar-1999 @12:26           Case Manager: DEMO USER
```

Figure 4-10: Letter print screen

## 4.2 Print Individual Patient Letter (LET)

The Print Individual Patient Letter (LET) option enables you to display or print any one of a list of form letters for a selected patient. This option is identical to the Letter Print (L) action of the Single Patient Record (SGL) menu option.

However, LET is provided so that clerical staff can send letters to patients without having access to edit patient data.

### To print an individual patient letter:

1. At the “Select Patent Menu Option” prompt, type LET.
2. At the “Select Patient Name” prompt, type the patient’s name, chart number, or DOB.
3. At the “Form Letter” prompt, type the name of the letter or ? to select from a list of available form letters

Figure 4-11 provides an example of an Official Immunization Record for an individual patient.

```

CHILDHOOD OFFICIAL IMMUNIZATION RECORD
UNSPECIFIED MEDICAL CENTER
801 Vassar
Anywhere, Alaska 12345
(123) 256-4000
30-Mar-1999
                                     Date of Birth: 01-Jan-1999 (2 months)
Parent/Guardian of
DEMO PATIENT
100 Main Street
ANYWHERE, ALASKA 12345

Our records show that DEMO has received the following immunizations:

      Immunization      Date Received      Location
      -----
      1-DtorP           26-Mar-1999       UNSPECIFIED Medical Center
      1-Hib             26-Mar-1999       UNSPECIFIED Medical Center

If you feel our records are not correct, please notify us so that we may make the
corrections to update our records.

Sincerely,
Your Outpatient Nursing Department

```

Figure 4-11: Sample Official Immunization Record

### 4.3 Patient Lists and Letters (LLS)

The Patient Lists and Letters (LLS) option enables you to print a Due List, Master List, or various letters for groups of patients. You may print the list or group of letters for a given forecast date, age range, patient group, a community or group of communities, or one or more case managers. This option gives you the ability to search for and print lists for a specific lot numbers or a specific vaccine type. Note that you can accept all default settings or change specific ones as necessary.

**To generate patient lists or letters:**

At the “Select Patent Menu Option” prompt, type **LLS**.

The system displays the Immunization Lists and Letters screen with a Select Action: prompt; for example,

```

IMMUNIZATION v8.3          Sep 15, 2008  16:53:03          Page: 1 of 1

          IMMUNIZATION LISTS AND LETTERS

1- Date of Forecast/Clinic . . . : 9/15/07
2- Age Range in Months . . . . . : 1 - 72 Months
3- Patient Group . . . . . : Patients DUE for Immunizations.

4- Communities . . . . . : ALL
5- Case Managers . . . . . : ALL
6- Immunizations Received . . . . : ALL
7- Immunizations Due. . . . . : ALL
8- Health Care Facility. . . . . : ALASKA NATIVE MEDICAL CENTER
9- Lot Numbers . . . . . : ALL
10- Additional Information. . . . . : Forecast
11- Order of Listing. . . . . : by Patient Age
12- Include Deceased. . . . . : No

          Select a left column number to change an item

List of Patients          Print Due Letters          Help

Select Action: Quit//
    
```

Figure 4-12: Immunization lists and letters screen display



### 4.3.1 About Patient List and Letters Parameters

The Immunization Lists and Letters screen provides a single point from which to view Due Lists and Master Lists, and to print Due Letters.

There are 12 parameters on the screen that you may change in order to select for a specific group of patients (see Immunization Lists and Letters screen). To change a parameter, enter its left column number (1-11) at the prompt on the bottom of the screen. Type ? at any prompt where you would like help or more information on the parameter you are changing.

Once you have the parameters set to retrieve the group of patients you want, select L to print or view the List of Patients, or select P to Print Due Letters.

In building this list to view or print, the computer must examine every patient in the Immunization Register. For this reason, on some computer systems it may take some time before the list appears.

**Note:** Several parameters involve a list of items, such as Communities, Case Managers, Immunizations Received, Lot Numbers, and so on. When editing these parameters you can build a list of one or more of the items pertaining to the parameter. The list you build is saved as your own personal list of this particular item and is presented again whenever you return to make selections from that list.

### 4.3.2 Specifying Parameters for a List or Letter

This section describes how to change information included in a selected list or letter.

#### 4.3.2.1 Date of Forecast/Clinic (1)

The Forecast Date or Clinic Date is the date that used for calculating which immunizations are due for patients. For example, if you choose today, the letter or report lists the immunizations and patients due today. If you choose a future date (the date of a clinic), the letter or report lists immunizations for that date.

**Note:** If you select a Forecast Date in the future, some patients may appear as Past Due for that date in the future, even though they are not Past Due today.

### 4.3.2.2 Age Range in Months (2)

Enter the patient Age Range in months, using a dash in between the limits of the range (e.g., 6 - 23). The Age Range includes patients whose ages span the minimum age to one day less than a month after the maximum age. For example, 6 -23 includes patients 6-months-old, up to, but not including, 24-months-old. You may also enter a single age, such as 12, to select for only 12-month-old patients. Enter ALL if you wish to simply include all patients regardless of age. Or, if you wish to select a range in years, enter Y to change from months to years.

### 4.3.2.3 Patient Group (3)

This item, shown in Figure 4-13, allows you to select the group(s) of patients to include in the list. You may include any combination of the descriptors listed from 1-6 by entering the numbers separated by commas (for example: 1, 3, 4). Due or Past Due, if selected alone, include only Active patients. Selection of #1, DUE, automatically includes #2, Past Due, as well. Note that Search Template cannot be combined with any other group.

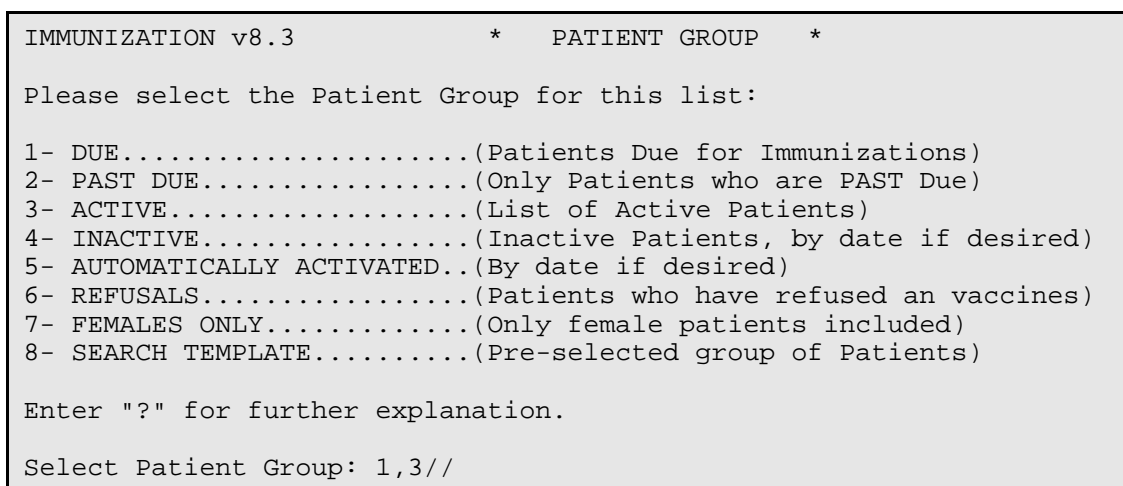


Figure 4-13: Patient group screen

In producing lists or letters, you may select the group of patients you wish to include by specifying attributes, such as Due, or Active. (This group may be further limited by the other criteria you select on the main Immunization Lists and Letters screen, such as Age Range, Communities, Lot Numbers, etc.).

The List choices of Active and Inactive simply lists patients in the register, whether due or not, unless they are combined with Due or Past Due. For example, 3 lists all Active patients in the register; 1, 3, 4 lists all patients (Active and Inactive), but only those due for immunizations.

Another example would be if you wanted to list (or send a letter to) all patients who have received a particular vaccine or lot number. For Patient Group here you would select 3, 4, then on the main Immunization Lists and Letters screen you would specify the vaccine under Immunizations Received or the lot number under Lot Numbers.

Search Templates are groups of individual patients produced and stored by other software, usually QMan, and saved under a Template Name. If you choose this attribute, you are asked to select from a list of existing Search Templates.

For more information about Search Templates and how to create your own, contact your computer support people for training.

#### 4.3.2.4 Communities (4)

This item allows you to select and save one or more communities for which you can print a list or letters. The default is All Communities. If you select specific communities, only patients whose current community (under Patient Registration) matches the selected communities are included in the export (See Figure 4-14).

```

SELECT ITEM          Sep 15, 2008 10:33:13          Page:  1 of 1

Select one or more Communities:

# Community          State
-----
1 ANYWHERE           ALASKA
2 DEMO               ALASKA
3 ANY COMMUNITY      ALASKA
-----

Type ?? for more actions

A Add an Item          E Entire File (Add ALL Items)
D Delete an Item       C Clear All (Delete ALL Items)

Select Action: Quit//

```

Figure 4-14: Select communities screen

Four Actions are available for editing these lists:

- **Add:** Adds another item to the list
- **Delete:** Removes an item from the list
- **Entire File (E):** Selects all of the specified items
- **Clear All (C):** Removes all of the specified items from the list

Your personal list of communities is saved each time you build it. Whenever you return to this list, the previous list of communities you built is presented as a default list.

#### 4.3.2.5 Case Managers (5)

The Case Managers item allows you to select and save one or more Case Managers of patients for whom you want to print a list or letters. The default is **All Case Managers**. If you select for specific Case Managers, only patients who have the selected Case Managers are included. The procedure for selecting Case Managers is the same as described above for selecting communities. Your personal list of Case Managers is saved each time you build it.

#### 4.3.2.6 Immunizations Received (6)

The Immunizations Received item allows you to select and build a list of vaccines received for your report. The default is **All Vaccines**. If you select for specific vaccines received, then only patients who have received the selected vaccines are included in the Lists and Letters. The procedure for selecting vaccines is the same as for selecting communities. Your personal list of vaccines is saved each time you build it.

#### 4.3.2.7 Immunizations Due (7)

This item allows you to select and build a list of vaccines due for your report. The default is **All Vaccines**. If you select for specific vaccines due, then only patients who are due for the selected vaccines are included in the Lists and Letters.

The procedure for selecting vaccines is the same as described above for selecting communities. Your personal list of vaccines is saved each time you build it.

Note that if the Patient Group (3) is strictly Past Due, then the Immunizations Due parameter becomes Immunizations Past Due. This allows searching for patients who are past due for specific vaccines.

#### 4.3.2.8 Lot Number (8)

You can select and build a list of lot numbers for your report. The default is All Lot Numbers. If you select for specific lot numbers, only patients who have received immunizations with the specified lot numbers are included in the Lists and Letters.

The procedure for selecting lot numbers is the same as described above for selecting communities. Your personal list of lot numbers is saved each time you build it.

#### 4.3.2.9 Health Care Facilities (9)

If you select for specific Facility, only patients who have a Health Record Number at one of the selected Health Care Facilities are included in the Lists and Letters.

#### 4.3.2.10 Additional Information (10)

When you print a list, you may select Additional Items of Patient Information to be included in the display or printout of this Patient List, shown in Figure 4-15. This selection does not pertain to the printing of Letters.

Any combination of items may be selected by entering the corresponding numbers, separated by commas. Items may also be selected inclusively by using a dash (-). For example, 1-5 includes items 1, 2, 3, 4, and 5.

Directions to House, Item 6, refers to the physical Location of Patient's Home, as edited on Page 9 of Patient Registration.

Parent/Guardian, Item 7, refers to the patient's parent or guardian as listed under Additional Patient Information of the Patient View in Immunization.

**Note:** This is not necessarily the same as the Father's Name or Mother's Maiden Name as listed in the RPMS Patient Registration module.

Next Appointment, Item 11, refers to the patient's next appointment, if the RPMS Scheduling package is in use on this system and if the patient has a future appointment scheduled.

Also note that Current Community automatically appears in the right-most column of the Due List when it displays or print. Current Community here refers to Page 1 (Field# 8) of Patient Registration.

```

IMMUNIZATION v8.3
*      ADDITIONAL INFORMATION      *

Please select any Items of Additional Patient Information you wish to be
included in the Due List by entering the corresponding number(s).

To include more than one Item, separate the numbers with commas. For
example: 1,2,4 would include Phone Number, Address, and Directions to House.

    0      No Additional Information
    1      Phone Number
    2      Address
    3      Immunization History
    4      Immunization History w/Lot#'s
    5      Immunization Forecast
    6      Directions to House
    7      Parent/Guardian
    8      Case Manager
    9      Reason Inactivated
   10      Skin Tests
   11      Next Appointment (RPMS Scheduling)

Select Items:

```

Figure 4-15: Additional items of patient information screen

#### 4.3.2.11 Order of Listing (11)

When you select Order of Listing, the Select Order screen, shown in Figure 4-16, allows you to select the order in which patients are sorted.

```

IMMUNIZATION v8.3
*      SELECT ORDER      *

Select the Order by which patients should be sorted.

    1      Patient Age
    2      Patient Name (alphabetically)
    3      Patient Chart#
    4      Case Manager
    5      Case Manager, then Community
    6      Community, then Case Manager
    7      Community, then Patient Age
    8      Community, then Patient Name
    9      Community, then Patient Chart#
   10      Zipcode, then Patient Name

Select Order: Patient Age//

```

Figure 4-16: Select order of listing screen

- **Patient Age** lists patients in order of increasing age.
- **Patient Name** lists patients by Last Name, First Name alphabetically.
- **Patient Chart#** lists patients by increasing Chart Number (Health Record Number).
- **Case Manager** lists patients grouped by Case Manager (and then by Patient Name alphabetically under each Case Manager).
- **Case Manager, then Community** lists patients grouped first by Case Manager and then by Community.
- **Community, then Case Manager** lists patients grouped first by Community and then by Case Manager.
- **Community, then Patient Age** lists patients grouped first by Community and then by Patient Age.
- **Community, then Patient Name** lists patients grouped first by Community and then by Patient Name.
- **Community, then Patient Chart#** lists patients grouped first by Community and then by Patient Chart#.
- **Zip Code, then Patient Name** begins with lowest zip codes first, then patient name (useful for bulk mailing discounts).

#### 4.3.2.12 Include Deceased (12 )

This option allows you to include deceased patients in the list or report. In general deceased patients are left off of lists and reports unless you need this for purposes such as tracking recipients of a particular vaccine or reconciling various reports.

### 4.3.3 Printing a List

This action either displays the list of selected patients on your screen as shown in Figure 4-17 from which you can also print the list, or it sends the list directly to the printer queue.

- **Print:** If it customarily takes a long time for your computer to produce a List of Patients, it may be more efficient for you to queue it to a printer. That way you can be free to do other things until the printout is finished.
- **View:** You must wait while the computer retrieves the information. However, once the List of Patients appears on the screen, you can browse the list on screen by scrolling up and down using the arrow keys. If you view it on your screen, you can also print it, but it takes longer this way than if you initially select Print.

```

IMMUNIZATION v8.3
WARNING: Confidential Patient Information, Privacy Act applies.

                UNSPECIFIED MEDICAL CENTER
                -----

Report Date: 31-Mar-2008      Total Patients: 6 (1-72 Months)
Clinic Date: 31-Mar-2008      Patient Group: Active

Name                HRCN#      DOB                Age                Parent/Guardian
=====
PATIENT, DEMO       12345      01-Jan-1999      (2 months)
Needs: HIB
      POLIO
-----
DEMO, JOANNE       67890      01-Jan-1999      (2 months)
Needs: HEPB
      HIB
      POLIO
-----
    
```

Figure 4-17: List of patients selected screen



#### 4.3.4 Print a Due Letter

The Print a Due Letter action sends a selected Due Letter to your printer or displays it on your screen (from which you can also print it). If you send a letter to your printer for a patient or group of patients, the Patient Immunization (Patient View screen) shows the date on which it was printed. Refer to the Manager Menu if you need to modify the Standard Form Letter. An example of a Print a Due Letter screen is shown in Figure 4-18.

```
IMMUNIZATION v8.3
* DATE/LOCATION LINE *

The Letter you have selected prints a Date/Location line between
The Bottom Section and the Closing Section of the letter.
An example would be:

    5-May-1998 at the Children's Clinic, UNPECIFIED Medical Center

This line may be up to 70 characters long.
Please enter/edit the Date/Location line now.

Line
    10/9/1998 at the Children's Clinic, UNPECIFIED Medical Center
```

Figure 4-18: Print a due letter screen

**Note:** If you have a Date/Location in your Form letter and you are asked to choose a DATE/LOCATION of CLINIC, you may enter a specific Clinic Appointment Date, or you may change this line to request that the parent call clinic for an appointment.

## 5.0 Reports Menu (REP)

The Reports Menu options generate the following standard reports:

- **Adolescent Report** - Presents immunization rates for patients 11 years 0 days through 17 years 364 days who have 2 clinical visits in the past 3 years.
- **Adult Report** - Presents immunization rates for patients over the age of 50 and over the age of 65.
- **Influenza Report** - Presents immunization rates for influenza vaccination for children 6-59 months of age.
- **3-27 Month Report** - Presents age-appropriate immunization rates in 3 to 27-month-old Active children.
- **Two-Yr-Old Rates Report** - Presents age-specific immunization rates for 19 to 35-month-old Active Children, including the 4-3-1-3 rate (4DTP, 3polio, 3Hib, 1MMR) used for national Year 2010 Objectives.
- **Vaccine Accountability Report** - Presents doses administered for a given time period by age group and series.

If you select View the Report, a prompt appears at the bottom of the screen that allows you to display and edit the patients included in the report. These patients can be grouped and displayed in one of three ways:

- Not Current (Not Age Appropriate)
- Current
- Both Groups

**Note:** This feature is only available if the report is viewed rather than printed.

**To use Immunization Report Menu options:**

1. Access the Immunization Menu from the RPMS Main Menu.
2. At the “Select Immunization Menu Option” prompt, type **REP**.

The system displays the Reports Menu; for example,

```

IMMUNIZATION v8.3          *   REPORTS MENU   *           Site: UNSPC MED
CTR                        =====           User: USER, DEMO

ADO    Adolescent Report
ADL    Adult Report
FLU    Influenza Report
QTR    3-27 Month Report
TWO    Two-Yr-Old Rates Report
VAC    Vaccine Accountability Report

Select Reports Menu Option:

```

Figure 5-1: Immunization Reports menu

## 5.1 Adolescent Report (ADO)

The Adolescent Immunization Report provides statistics on Adolescent Immunizations. The population of patients reviewed includes those patients from 11 years 0 days to 17 years 364 days seen at least twice in the past three years and living in a community specified by the user (these patients are often referred to in RPMS as Active Clinical Users).

The Adolescent report follows the logic of the National Immunization Survey to provide immunization coverage rates for single vaccines and groups of vaccines in children 11 to 12 years, 13 years, and 13 to 17 years of age by certain key ages (i.e., 3 HepB and 2 MMR and 1-Td/Tdap, 3-HepB, 2-MMR, 1-Var) by the date of the report. A nationally reported measure in the National Immunization Survey is 1-Td/Tdap, 3-HepB, 2-MMR, 1-Var.

This report displays Active children who are between 11 years 0 months and 17 years 11 months of age on the selected date of the report. The key ages by which vaccines were received are listed across the top of the report. Total patients who received each dose of the vaccines for each age-group are listed in rows beside each dose (e.g., the total number (%) of 11 to 12 year old patients receiving 3-HepB by the Report Date). The date header on far left header signifies doses received by the report date and includes all doses a child received up to the Quarter Ending Date chosen. All percentages represent a fraction of the total patients as noted at the top and bottom of the report.

**Criteria**

- **Single Antigens:** HepB doses 1-3, MMR dose 1-2, Varicella doses 1-2 and Hx of Chickenpox, Tdap or Td/Tdap 1 dose, HepA doses 1-2, Meningococcal dose 1, Flu dose 1 in past year. For females, the report also monitors HPV vaccine doses 1-3.
- **Combinations:** Two combinations of vaccines are monitored for both genders: 1-Td/Tdap, 3-HepB, 2-MMR, 1-Var; and 1-Td/Tdap, 3-HepB, 2-MMR, 1-Mening, 2-Var. In addition, the following combination is monitored for females: 1-Td/Tdap, 3-HepB, 2-MMR, 1-Mening, 2-Var, 3-HepB.

**Report Parameters**

There are five items or parameters shown in Figure 5-2 that you may change to select a specific group of patients.

- **Quarter Ending Date (1):** The report compiles immunization rates as of the date entered. Typically, this date is the end of a quarter.
- **Community (2):** If you select specific communities, only patients whose current community matches selected communities is included in the report. Current Community refers to Item 6 on Page 1 of the RPMS Patient Registration.
- **Health Care Facility (3):** If you select specific Health Care Facilities, only Patients who have active chart numbers at one or more of the selected facilities is included in the report.
- **Case Manager (4):** If you select specific Case Managers, only patients who have the selected Case Managers are included.
- **Beneficiary Types (5):** If you select Beneficiary Types, only patients whose beneficiary type is one of those you select is included in the report. Beneficiary Type refers to Item 3 on page 2 of the RPMS Patient Registration package.

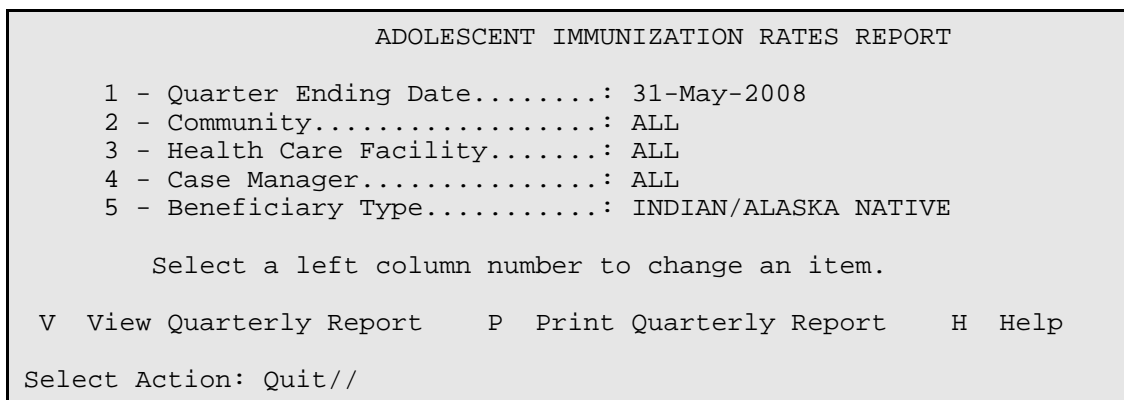


Figure 5-2: Adult immunization report screen

UNSPECIFIED Medical Center IHS Adolescent Immunization Rates For patients 11 through 17 Years of Age			
As of: 31-May-2008		Total Patients: 2631 Total Females: 1299	
Beneficiary Type: INDIAN/ALASKA NATIVE			
Age Group Denominators	11-12yrs 1139	13yrs 338	13-17yrs 1492
1-HEPB	1082 95%	288 85%	1213 81%
2-HEPB	1066 94%	282 83%	1159 78%
3-HEPB	1042 91%	278 82%	1115 75%
1-MMR	1095 96%	304 90%	1251 84%
2-MMR	1025 90%	278 82%	1153 77%
1-VAR	570 50%	116 34%	311 21%
2-VAR	113 10%	33 10%	64 4%
Hx of Chickenpox (Immune)	365 32%	114 34%	601 40%
1-Tdap	359 32%	118 35%	311 21%
1-Tdap/Td	418 37%	237 70%	1168 78%
1-HEPA	1076 94%	295 87%	1289 86%
2-HEPA	1014 89%	272 80%	1157 78%
1-MEN	11 1%	8 2%	84 6%
1-FLU	37 3%	14 4%	58 4%

1-TD_B 3-HEPB 2-MMR 1-VAR	199 17%	86 25%	240 16%
1-TD_B 3-HEPB 2-MMR 1-MEN 2-VAR	4 0%	3 1%	13 1%
Female Denominators	11-12yrs 556	13yrs 166	13-17yrs 743
1-HPV	8 1%	3 2%	19 3%
2-HPV	5 1%	2 1%	8 1%
3-HPV	0	0	0
1-TD_B 3-HEPB 2-MMR 1-MEN 2-VAR 3-HPV (females)	0	0	0
Total Active Patients reviewed: 2631    Total Active Females reviewed: 1299			
Total Patients reviewed who had Refusals on record: 18			
*Denominators are Active Clinical Users: 2 clinical visits in the past 3 years.			
*Patients considered "Current" have 1-Td_B, 3-HEPB, 2-MMR, 1-VAR/Hx_Varicella.			

Figure 5-3: Sample adult immunization report

## 5.2 Adult Report (ADL)

The Adult Immunization Report provides statistics on Adult Immunizations. The population of patients reviewed is those over the age of 50, seen at least twice in the past three years, and living in the specified community. (These patients are often referred to in RPMS as Active Clinical Users.)

### Criteria

- Tetanus:** The patient must have had a tetanus immunization documented in the past 10 years. This includes any of the following CVX Codes: 1, 9, 20, 22, 28, 35, 50, 106, 107, or 110.
- Influenza:** The patient must have had an influenza immunization documented in the past year. This includes CVX Codes 15, 16, 88, 111 or a diagnosis of V04.8 or V06.6 or a CPT Code of 90657, 90658, 90659, or 90660.
- Pneumovax:** The patient must have had a pneumococcal immunization documented ever (and in the past 6 years in Alaska). This includes any of the following CVX Codes: 33, 100, or 109.

## Report Parameters

The Adult Immunization Report screen, shown in Figure 5-4, allows you to adjust the report to your needs. There are four parameters on the screen that you may use to select a specific group of patients. To change an item, enter its left column number (1-4) at the prompt on the bottom of the screen. Type ? at any prompt for more information about the parameter you are changing.

Once you have the parameters set to retrieve the group of patients you want, select V to view the Adult Report or P to print it. Figure 5-5 provides an example of an adult immunization report.

If it customarily takes a long time for your computer to prepare this report, it may be preferable to print and queue the report to a printer, rather than viewing it on screen. (This would avoid tying up your screen while the report is being prepared).

- **Quarter Ending Date (1):** The report compiles immunization rates as of the date entered. Typically, this date would be the end of a quarter. The system interprets most forms in which you type the date. If you type in only a month and a year, the system assigns the last day of the month for the report. The patient ages (65 years, etc.) are calculated as of the date you enter here:
- **Community (2):** If you select communities, only patients whose current community matches one of the communities selected is included in the report. Current Community refers to Item 6 on page 1 of the RPMS Patient Registration package.
- **Health Care Facility (3):** If you select Health Care Facilities, only patients who have active chart numbers at a selected facilities are included in the report.
- **Beneficiary Types (4):** If you select Beneficiary Types, only patients whose beneficiary type is one of those you select to include in the report. Beneficiary Type refers to Item 3 on page 2 of the RPMS Patient Registration package.
- **CPT Coded Visits (5):** If you type YES in this field, the report searches for and includes any immunizations that were only entered as CPT Codes.





## 5.3 Influenza Report (FLU)

This Influenza Report is designed to comply with influenza vaccination recommendations for children 6-59 months of age. The report examines the influenza season (9/1 - 12/31) for the year selected.

- **Report Columns**

The Age in Months is calculated on 12/31 of the year selected, to include children who were 6-59 months of age during entire influenza season (9/1 - 12/31).

The first column, 10-23 months, includes children who were 6-23 months old during the influenza season of the selected year.

The second column, 24-59 months, includes children who were 24-59 months during the entire influenza season of the selected year.

- **Report Rows**

The Denominator row of the report is the number of children within that age group who are included in the report.

**Note:** Any child who was Inactivated prior to 12/31 of the selected year is included in the report.

The 1-Influenza year season row of the report includes all children who received at least one dose during the influenza season of the year selected (Sept-Dec).

The Fully immunized row of the report includes children who are:

- 10-23 Months Old, who
  - 1) Received 2 doses during the influenza season of the year selected. (Sept 1 - Report date or January 31, whichever is first),  
or
  - 2) Received 1+ dose before Sept 1 and 1+ dose during Sept-December.
- 24-59 Months Old, who
  - 1) Received 2 doses during the influenza season of the year selected. (Sept 1 - Report date or January 31, whichever is first),  
or
  - 2) Received 2+ dose before Sept 1 and 1+ dose during Sept-December.

The Influenza REPORT screen, shown in Figure 5-6, allows you to adjust the report to your needs.

### Report Parameters

- **Quarter Ending Date (1):** The report compiles immunization rates as of the date entered. Typically, this date is the end of a quarter. The system interprets most forms in which you type the date. If you type in only a month and a year, the system assigns the last day of the month for the report. The patient ages (65 years, etc.) are calculated as of the date you enter here:
- **Community (2):** If you select communities, only patients whose current community matches the communities selected is included in the report. Current Community refers to Item 6 on page 1 of the RPMS Patient Registration package.
- **Health Care Facility (3):** If you select Health Care Facilities, only patients who have active chart numbers at selected facilities are included in the report.
- **Beneficiary Types (4):** If you select Beneficiary Types, only patients whose beneficiary type matches those you select are in the report. Beneficiary Type refers to Item 3 on page 2 of the RPMS Patient Registration package.
- **CPT Coded Visits (5):** If you type YES in this field, the report searches for and includes any immunizations that were only entered as CPT Codes.

```

                                Influenza REPORT

1 - Report Year (Flu Season)...: 2007  (09/01/07 - 12/31/07)
2 - Community.....: ALL
3 - Health Care Facility.....: UNSPEC MED CTR
4 - Case Manager.....: ALL
5 - Beneficiary Type.....: INDIAN/ALASKA NATIVE

      Select a left column number to change an item.

V  View Flu Report           P  Print Flu Report           H  Help

Select Action: Quit//
    
```

Figure 5-6: Flu Report screen

Once you have the parameters set to retrieve the group of patients you want, select V to view the Adult Report or P to print it. Figure 5-7 provides an example of an influenza report.

If it customarily takes a long time for your computer to prepare this report, it may be preferable to send the report to a printer, rather than viewing it on screen. (This allows you to do other tasks while the report is being prepared).

Immunization v8.3t1		Aug 29, 2008 16:39:15		Page: 1 of 2	
UNSPECIFIED Medical Center Influenza Immunization Report 29-Aug-2008					
-----					
Beneficiary Type: INDIAN/ALASKA NATIVE					
-----					
	Age in Months on 12/31/2007			Totals	
	10-23	24-59			
Denominator	1	5		6	
-----					
1-Influenza 2007 Season	1 100%	1 20%		2 33%	
-----					
Fully Immunized	1 100%	1 20%		2 33%	
-----					
Total Patients included who had Influenza Refusals on record				0	
-----					

Figure 5-7: Sample Flu Report

## 5.4 3-27 Month Report (QTR)

With this Reports Menu option you can generate a report of the age-appropriate immunization rates for Active children 3 to 27 months of age. The Immunization Quarterly Report screen, shown in Figure 5-8, allows you to adjust the report to your needs. Figure 5-9 provides an example of this report.

The IHS and Tribal programs report the current age-appropriate immunization rate of active children 3 to 27 months of age. The criteria listed below are used by IHS to determine the up-to-date status of children in each age group, and the age-specific rates are combined into a total rate. Pneumococcal, Varicella, and Hepatitis A vaccines can be included in the report totals by typing YES for option 6. However, for your report to Headquarters type NO to exclude these from the totals. Age-appropriate immunization rates are given for each age group as well as a total 3 to 27 months age-appropriate rate, using the following criteria: (Note that Hib requirements match the PedvaxHIB schedule).

**Table 5-1: Age-Appropriate Immunization Rates**

Age	Vaccine
3-4 months old	1-DTaP 1-IPV 1-Hib 1-HepB
5-6 months old	2-DTaP 2-IPV 2-Hib 2-HepB
7-15 months old	3-DTaP 2-IPV 2-Hib 2-HepB
16-18 months old	3-DTaP 2-IPV 3-Hib 2-HepB
19-23 months old	4-DTaP 3-IPV 3-Hib 3-HepB 1-MMR
24-27 months old	4-DTaP 3-IPV 3-Hib 3-HepB 1-MMR

### Report Parameters

- **Quarter Ending Date (1):** The report compiles immunization rates as of the date entered. Typically, this date is the end of a quarter. The system interprets most forms in which you type the date. If you type in only a month and a year, the system assigns the last day of the month for the report. The patient ages (3 months, 5 months, etc.) will be calculated as of the date you enter here.
- **Community (2):** If your selection is for specific communities, only patients whose current community (under Patient Registration) matches one of the communities selected is included in the report. Current Community refers to Item 6 on Page 1 of the RPMS Patient Registration package.
- **Health Care Facility (3):** If you select Health Care Facilities, only patients who have active chart numbers at one or more of the selected facilities are included in the report. (The default facility is the one under which you have logged in).
- **Case Manager (4):** If you select Case Managers, only patients who have the selected Case Managers are included in the report.
- **Beneficiary Types (5):** If you select Beneficiary Types, only patients whose Beneficiary Type is one you selected are included in the report. Beneficiary Type refers to Item 3 on page 2 of the RPMS Patient Registration package.
- **Include Hep A, Pneumo & Var (6):** Answer YES if you wish to have the HepA, Pneumo, and Varicella rates included in the Appropriate for Age statistics at the top of the report.

```

Immunization v8.3                Feb 17, 2008 16:23:04                Page: 1 of
1

                                QUARTERLY IMMUNIZATION REPORT

1 - Quarter Ending Date.: 31-Mar-1998
2 - Community. . . . .: ALL
3 - Health Care Facility: UNSPECIFIED MEDICAL CENTER
4 - Case Manager . . . .: ALL
5 - Beneficiary Type....: ALL
6 - Include Hep A, Pneumo & Var: NO

        Select a left column number to change an item.

V View Quarterly Report   P Print Quarterly Report   H Help

Select Action: Quit//
    
```

Figure 5-8: 3-27 Month Report screen

**Note:** The software stores every patient in the report. If you View the Report, a prompt appears at the bottom of the screen that allows you to print lists of patients who were: Not Current (Not Age Appropriate), Current, or Both Groups. (This is only available if the report is viewed rather than printed).

It is possible that some children are Not Age Appropriate because they are behind on vaccines, so they may not be due for any immunizations. Also, any immunizations given after the Quarter Ending Date of the report are not counted.

UNSPECIFIED Medical Center Quarterly Immunization Report For Children 3-27 Months of Age 30-Sep-2008								
-----								
Facility: UNSPEC MED CTR								
-----								
	Age in Months						Totals	
	3-4	5-6	7-15	16-18	19-23	24-27		
# in Age	138	138	587	190	275	271	1599	
Minimum Needs	1-DTaP 1-POLIO 1-HIB 1-HEPB	2-DTaP 2-POLIO 2-HIB 2-HEPB	3-DTaP 2-POLIO 2-HIB 2-HEPB	3-DTaP 2-POLIO 3-HIB 2-HEPB 1-MMR	4-DTaP 3-POLIO 3-HIB 3-HEPB 1-MMR	4-DTaP 3-POLIO 3-HIB 3-HEPB 1-MMR		
Approp. for Age	119 86%	101 73%	458 78%	148 78%	186 68%	217 80%	1229 77%	
1-DTaP	119	126	539	179	258	259	1480	
2-DTaP	28	102	515	170	248	253	1316	
3-DTaP		25	463	160	237	248	1133	
4-DTaP			15	68	190	222	495	
1-POLIO	120	126	538	178	257	258	1477	
2-POLIO	28	101	512	169	243	252	1305	
3-POLIO		26	459	158	228	243	1114	
1-MMR			168	154	238	247	807	
1-HIB	120	126	538	178	258	260	1480	
2-HIB	27	102	506	171	243	253	1302	
3-HIB			181	149	223	236	789	
4-HIB			6	10	16	26	58	
1-HEPB	128	133	548	182	262	264	1517	
2-HEPB	101	125	521	176	249	252	1424	
3-HEPB	19	77	456	166	236	244	1198	
1-VAR			141	139	215	226	721	
1-HEPA				1	1	134	136	
2-HEPA						1	1	
1-PNE	118	126	533	177	252	256	1462	
2-PNE	26	99	506	167	238	250	1286	
3-PNE		25	405	131	214	234	1009	
4-PNE			7	24	111	132	274	
1-ROTA	118	126	533	177	252	256	1462	
2-ROTA	26	99	506	167	238	250	1286	
3-ROTA		25	405	131	214	234	1009	
Total Patients included who had Refusals on record							14	

Figure 5-9: Sample 3-27 Month Report

## 5.5 Two-Yr-Old Rates Report (TWO)

The Two-Yr-Old Immunization report, shown in Figure 5-10, provides age-specific immunization rates for individual vaccines (e.g., DTaP) as well as groups of vaccines (e.g., DTaP 4, polio 3, MMR 1), in active children currently 19 to 35 months of age.

```

Immunization v8.3                Feb 17, 2008 16:23:04                Page: 1 of
1

                                TWO-YR-OLD IMMUNIZATION RATES REPORT

1 - Quarter Ending Date.: 31-May-2008
2 - Age Range.....: 19-35 months
3 - Community. . . . .: ALL
4 - Health Care Facility: UNSPECIFIED MEDICAL CENTER
5 - Case Manager . . . . .: ALL
6 - Beneficiary Type....: INDIAN/ALASKA NATIVE

        Select a left column number to change an item.

V View Rates Report                P Print Rates Report                H Help

Select Action: Quit//
    
```

Figure 5-10: Two-Yr-Old Rates Report

The Two-Yr-Old report audits immunization data in the same manner as CDC’s CASA (Clinic Assessment Software Application) software, the National Immunization Survey and the Year 2010 Health Objectives. Figure 5-11 is provided as an example of this report.

- Single vaccines: for example, % with DT(a)P 1 by age 3 months:
  - % with DT(a)P 2 by age 5 months
  - % with DT(a)P 3 by age 7 months
  - % with DT(a)P 4 by age 19 months, by 24 months, by the report date
- Vaccine groups: for example, % with DT(a)P 1, polio 1, Hib 1, Hep B 1 by age 3 months:
  - % with DT(a)P 4, polio 3, Hib 3, MMR 1 by age 24 months, by the report date

UNSPECIFIED Medical Center IHS Two-Yr-Old Immunization Rates For Children between 19 and 35 Months of Age							
As of: 30-Sep-2003				Total Patients: 1066			
----- Facility: UNSPEC MED CTR -----							
Received by	3 mo # %	5 mo # %	7 mo # %	16 mo # %	19 mo # %	24 mo # %	09/30/03 # %
=====							
1-DTaP	941 88%	980 92%	998 94%	1011 95%	1016 95%	1019 96%	1021 96%
2-DTaP	12 1%	760 71%	912 86%	982 92%	989 93%	993 93%	995 93%
3-DTaP	1 0%	4 0%	647 61%	923 87%	941 88%	957 90%	963 90%
4-DTaP	1 0%	1 0%	3 0%	297 28%	710 67%	830 78%	867 81%
1-POLIO	932 87%	981 92%	997 94%	1010 95%	1015 95%	1016 95%	1017 95%
2-POLIO	12 1%	751 70%	907 85%	975 91%	978 92%	982 92%	984 92%
3-POLIO	2 0%	5 0%	628 59%	908 85%	922 86%	934 88%	942 88%
1-HIB	931 87%	975 91%	992 93%	1014 95%	1019 96%	1021 96%	1022 96%
2-HIB	11 1%	747 70%	897 84%	975 91%	979 92%	984 92%	985 92%
3-HIB	1 0%	5 0%	89 8%	849 80%	893 84%	915 86%	920 86%
4-HIB	1 0%	1 0%	2 0%	108 10%	124 12%	128 12%	132 12%
1-HEPB	984 92%	1005 94%	1015 95%	1029 97%	1031 97%	1033 97%	1035 97%
2-HEPB	829 78%	919 86%	951 89%	985 92%	986 92%	990 93%	991 93%
3-HEPB	12 1%	560 53%	707 66%	916 86%	935 88%	947 89%	950 89%
1-MMR				876 82%	926 87%	956 90%	969 91%
1-VAR			1 0%	660 62%	769 72%	828 78%	877 82%
1-HEPA				5 0%	5 0%	20 2%	509 48%
2-HEPA							61 6%
-----							



1-PNE	834 78%	935 88%	966 91%	992 93%	997 94%	999 94%	1002 94%
2-PNE	11 1%	660 62%	850 80%	946 89%	954 89%	961 90%	964 90%
3-PNE	1 0%	6 1%	529 50%	821 77%	854 80%	882 83%	895 84%
4-PNE	1 0%	1 0%	4 0%	141 13%	352 33%	422 40%	555 52%
1-Rota	834 78%	935 88%	966 91%	992 93%	997 94%	999 94%	1002 94%
2-Rota	11 1%	660 62%	850 80%	946 89%	954 89%	961 90%	964 90%
3-Rota	1 0%	6 1%	529 50%	821 77%	854 80%	882 83%	895 84%
1-DTaP 1-POL 1-HIB 1-HEPB	911 85%	964 90%	985 92%	1006 94%	1009 95%	1010 95%	1012 95%
4-DTaP 3-POL 1-MMR				290 27%	702 66%	825 77%	862 81%
4-DTaP 3-POL 1-MMR 3-HIB				286 27%	696 65%	816 77%	852 80%
4-DTaP 3-POL 1-MMR 3-HIB 3-HEPB				280 26%	686 64%	805 76%	841 79%
4-DTaP 3-POL 1-MMR 3-HIB 3-HEPB 1-Var				280 26%	686 64%	805 76%	841 79%
4-DTaP 3-POL 1-MMR 3-HIB 3-HEPB 1-VAR 3-PNE					1 0%	13 1%	429 40%
4-DTaP 3-POL 1-MMR 3-HIB 3-HEPB 1-VAR 4-PNE					1 0%	13 1%	429 40%
4-DTaP 3-POL 1-MMR 3-HIB 3-HEPB 1-VAR 4-PNE 1-HEPA					1 0%	13 1%	429 40%

4-DTaP 3-POL	1	13	429
1-MMR 3-HIB	0%	1%	40%
3-HEPB 1-VAR			
4-PNE 1-HEPA			
3-ROTA			
-----			
4-DTaP 3-POL	1	13	429
1-MMR 3-HIB	0%	1%	40%
3-HEPB 1-VAR			
4-PNE 1-HEPA			
3-ROTA, 2-FLU			
-----			
Total Active Patients reviewed:			1066
-----			
Total Patients included who had Refusals on record			12

Figure 5-11: Sample of Two-Yr-Old Rates Report

## 5.6 Vaccine Accountability Report (VAC)

The Vaccine Accountability report, shown in Figure 5-12, shows doses administered by vaccine series (e.g., DTaP) and by age group. This report can be printed for any time period (typically, these are monthly reports) for a given facility, visit type (e.g. PHN, 638), or for a community or group of communities. Figure 5-13 is provided as an example of this report.

```

Immunization v8.3           Oct 21, 1999 15:00:58           Page: 1 of 1

                VACCINE ACCOUNTABILITY REPORT

1 - Date Range.....from: 21-Oct-1998
                        to: 21-Oct-1999
2 - Community.....: ALL
3 - Health Care Facility: ALL
4 - Case Manager.....: ALL
5 - Beneficiary Type....: ALL
6 - Visit Type.....: YES
7 - Include Historical..: YES

      Select a left column number to change an item.

V  View Account Report      P  Print Account Report      H  Help

Select Action: Quit//
    
```

Figure 5-12: Vaccine Accountability Report selection screen

UNSPECIFIED Medical Center Vaccine Accountability Report 28-Jan-2004												
Reporting period: 30-Sep-2002 to 30-Sep-2003										(Historical Included)		
<1	-1-	-2-	3-5	-6-	7-10	11-12	13-18	19-24	25-44	45-64	65+	TOTAL
DT-PEDS												
5	3		3		1	1	2			1		16
DTP												
17	5		5		2			1	4	1		35
DTaP												
3207	1259	184	1401	22	3	1	4		4	1		6086
Td-ADULT												
	1		4		61	941	1142	517	1625	948	295	5534
IPV												
3170	282	54	1342	22	15	12	45	3	5	7	1	4958
OPV												
10			1									11
HIBTITER												
40	18	2	1					1				62
PEDVAXHIB												
2209	1280	62	32	2	1		6	1	1	4		3598
HBIG												
3							2		1	1		7
HEP B												
134	165	7	8	6	3	8	50	35	86	49	5	556
HEP B ADLT												
			1			1	30	238	571	290	35	1166
HEP B PED												
3260	1005	48	90	46	43	57	174	21	11	3	1	4759
MMR												
6	1268	59	1316	12	11	7	61	104	180	19		3043
VARICELLA												
5	1213	158	154	16	75	31	127	4	13	1		1797

HEP A												
3	12	1618	1103	69	148	185	543	111	246	89	2	4129
INFLUENZA												
151	297	186	422	92	331	182	463	534	2763	3351	1948	10720
PNEUM-CONJ												
2878	1062	241	209		2	1	3	2	12	22	21	4453
PNEUMO-PS												
5	4	6	11	2	13	4	34	13	153	605	412	1262
MENING-PS												
3							19	4				26
RSV-MAb												
411	81	18	9									519
COMVAX												
		1										1
PEDIARIX												
7												7
TOTAL IMMUNIZATIONS (for all vaccines in this report)											52745	

Figure 5-13:: Sample Vaccine Accountability Report

## 6.0 Manager Menu (MGR)

Site managers use Manager Menu options to perform functions, such as adding and editing Form Letters, editing Site Parameters, re-standardizing the Vaccine Table, and exporting immunizations in flat ASCII Text. The Manager Menu is locked and is available only to those who hold the Manager Key.

Only Case Managers and Program Managers have access to the Manager Menu. From this menu, managers can correct patient errors, add/edit Case Managers, edit site parameters for the Immunization Tracking System, re-standardize the Vaccine Table, and export Immunization Data to another software program or to an agency (e.g., State Health Department), and more.

### To use Manager Menu options:

1. Access the Immunization Menu from the RPMS Main Menu.
2. At the “Select Immunization Menu Option” prompt, type **MGR**.

The Manager Menu displays the options shown in Figure 6-1.

```

IMMUNIZATION v8.3      *   MANAGER MENU   *           Site: UNSPEC MED
CTR
                        =====
                                User: USER, DEMO

ERR      Edit Patient Errors
CMG      Add/Edit Case Manager
CMT      Transfer a Case Manager's Patients
SCN      Scan For Patients
-----
ESP      Site Parameters Edit
PKG      Package Setup Information
LET      Form Letters Add/Edit
LOT      Lot Number Add/Edit
VAC      Vaccine Table Edit
RES      Restandardize Vaccine Table
EXP      Export Immunizations
KEY      Allocate/Deallocate Imm Menu Keys

Select Manager Menu Option: ERR      Edit Patient Errors
    
```

Figure 6-1: Manager menu

## 6.1 Edit Patient Errors (ERR)

The Edit Patient Errors (ERR) Manager menu option, shown in Figure 6-2, displays patient Immunization histories that contain errors according to the IMMServe Forecasting program and provides you with the ability to correct or delete those errors. The columns, from left to right, list the following:

- Patient Name
- Active/Inactive Status (A=Active, I=Inactive, N=Not In Register)
- HRCN# (Health Record Number or Chart#)
- Age (y=years, m=months, d=days)
- Vaccine Group in which the error is occurring
- An abbreviated statement explaining the error

The three actions at the bottom of the screen enable you to make corrections to patient errors on the list (Edit Patient Error) or to delete them, either individually (Delete Patient Error) or all at once (Clear/Delete All Errors) from the list.

Indian Medical Center						
-----						
ALL PATIENT ERRORS (Total: 20)						
#	Patient	Active	HRCN#	Age	V Grp	Error
1	Patient,Demo	I	123456	9y	HIB	Un-Numbered Dose
2	Patient,Demo	I	654321	10y	HEPB	Un-Numbered Dose
3	Patient,Demo.	I	000001	10y	HIB	Un-Numbered Dose
4	Patient,Demo	A	000002	12y	HEP	Duplicate Dose#'S
Enter ?? for more actions						
E Edit Patient Error      D Delete Patient Error      C Clear/Delete All Errors						
Select Action: Quit//						

Figure 6-2: Edit patient errors screen

## 6.2 Add/Edit Case Manager (CMG) )

The Add/Edit Case Manager (CMG) Manager menu option, shown in Figure 6-3, enables the manager to add or edit a Case Manager. When you add new Case Managers, they can be selected when editing a patient's Case Data. The Date Inactivated field makes it possible for you to inactivate case managers.

```

Immunization v8.3
                                *  ADD/EDIT CASE MANAGERS  *

Select CASE MANAGER:  MANAGER, DEMO <Enter>      DM          MANAGER
...OK? Yes// <Enter>  (Yes)
DATE INACTIVATED:
  
```

Figure 6-3: Add/edit case manager's screen

## 6.3 Transfer a Case Manager's Patients (CMT) )

The Transfer a Case Manager's Patients (CMT) Manager menu option enables the manager to transfer patients to another case manager in events such as a turnover in staff or a re-assignment of cases. Figure 6-4 shows an example of a Transfer Case Manager's Patients screen. The person indicated as the new Case Manager must first be added to the file using the Add/Edit Case Managers option.

```

Select OLD CASE MANAGER:  ?? <Enter>
Choose from:
    DEMO, DEMO
    MANAGER, DEMO
    MANAGER, DEMO
    MANAGER, DEMO2

Select OLD CASE MANAGER:  MANAGER, DEMO <Enter>
Select NEW CASE MANAGER:  MANAGER, DEMO2 <Enter>      RM
All patients currently assigned to:  MANAGER, DEMO
Will be reassigned to.....:  MANAGER, DEMO2
Do you wish to proceed?  Enter Yes or No?  YES <Enter>
22 patients transferred from MANAGER, DEMO to MANAGER, DEMO2.
  
```

Figure 6-4: Transfer a case manager's patients screen

## 6.4 Scan for Patients (SCN)

The Scan for Patients (SCN) Manager menu option scans the RPMS Patient Database for children who are less than 36-months-old. Any child who is not in the Immunization Database and who lives in one of the Communities you select is made Active in the Immunization Register.

You can select specific communities (the Current Community field in RPMS Patient Registration.) to scan for patients. Then, you can use the GPRA set of communities by selecting one of the following options:

- **G** to use the GPRA set and proceed automatically
- **L** to LOAD the GPRA set and then edit your list before proceeding
- **P** to load the PREVIOUS set of Communities you used

## 6.5 Site Parameters Edit (ESP)

The Site Parameters Edit (ESP) Manager menu option enables the manager to edit parameters that are specific to a site (facility) as shown in Figure 6-5.

```

Immunization v8.3          Oct 09, 1998   10:35:35          Page: 1 of 1

Edit Site Parameters for: INDIAN MEDICAL CENTER
-----
1) Default Case Manager.....:  MANAGER, DEMO
2) Other Location.....:      OTHER NON-IHS (e.g. private doctor)
3) Standard Imm Due Letter ....: Standard Due Letter
4) Official Imm Record Letter...: Official Immunization Report
5) Facility Report Header.....:  INDIAN MEDICAL CENTER
6) Host File Server Path.....:  C:\INETPUB\FTPROOT\PUB\
7) Minimum Days Last Letter....: 60 days
8) Minimum vs Recommended Age...: Recommended Age
9) ImmServe Forecasting Option..: #7, WITH 4-Day Grace, HPV through 26
10) Lot Number Options.....:    Required, Low Supply Alert=50
11) Age Appropriate for Pneumo...: 65 years old
12) Forecasting (Imms Due).....: Enabled
13) Chart# with dashes.....:    No Dashes (123456)
14) User as Default Provider.....: No
15) Immserve Directory.....:    C:\Program Files\Immserve82\
16) GPRA Communities.....:      6 Communities selected for GPRA.
17) Inpatient Visit Check.....: Enabled
18) High Risk Factor Check.....: Enabled
19) Import CPT-coded Visits.....: Enabled

Select a left column number to change an item.

Select Action: Quit//

```

Figure 6-5: Edit site parameters screen

For more information relating to the Site Parameters, see the Package Setup Information(PKG) Manager option.



### 6.5.1 Default Case Manager

The Case Manager who is presented automatically as a default at all Case Manager prompts; for example, when you are adding a new patient.

### 6.5.2 Other Location

An entry in the IHS Location file that is designated as the Other Location for a PCC Visit when the location is not in the Location File (e.g., private doctor).

### 6.5.3 Standard Imm Due Letter

The form letter that is sent to patients or their parents listing their Immunization History, and informing them of which immunizations are due next. It may also contain information about where and when to receive the next immunizations. The letter selected here is presented as the default letter to use when printing Due Letters. To select the letter for this Site Parameter, it must already have been created with the LET option on the Manager Menu (MGR > LET). Create a new letter named Standard Due Letter and then return to this site parameter to choose it.

### 6.5.4 Official Imm Record Letter

This is the letter that presents all of a patient's Immunization information and is generally sent to schools, parents, other clinics, etc. The letter selected here is used as the patient's Official Immunization Record whenever users select that action. To select the letter for this Site Parameter, it must already have been created using the LET option on the Manager Menu (MGR > LET). Create a new letter named Official Immunization Record and then return to this site parameter to choose it.

### 6.5.5 Facility Report Header

This is the name of your site or institution as you want it to appear at the top of various reports and screens throughout this software goes into the Facility Report Header. (This may be the same as the Site Name that appears on some screens; however, that name is often an abbreviated form of the site name).

### 6.5.6 Host File Server Path

This is the directory on the Host File Server where files to be imported and exported are stored. Include all necessary slashes in the path name (everything except the filename itself). For example: C:\TEMP\ (on a PC) or /usr/mumps/ (in UNIX).

### 6.5.7 Minimum Days Last Letter

This is the least number of days that must pass after a patient letter is printed before the software automatically prints another letter to the same patient. The software does not print a second Due Letter within the default number of days since the last one was generated. The Case Manager can change this number when printing Due Letters and you can print an individual letter at any time.

### 6.5.8 Minimum vs. Recommended Age

This parameter enables you to direct the IMMserve Forecasting program to forecast Immunizations due at either the Minimum Acceptable Patient Age or at the Recommended Age (e.g.10 weeks of age vs. 4 months of age).

### 6.5.9 ImmServe Forecasting Option

See **Error! Reference source not found.** Versions 1, 3, 5, 7, 9 and 11 forecast the first vaccines series at 6 weeks, the others beginning at 2 months. All versions forecast Rotavirus at 2 (6 weeks), 4, and 6 months, HepA starting at 15 months, and Influenza between September and March for infants 6-59 months. Option 11 does not forecast HepA or HepB in persons over 18 years, regardless of prior doses. All options forecast Tdap, MCV4, and HPV for adolescents per ACIP recs. Figure 6-6 shows forecasting options.

Option	6 Mths	12 Mths	15 Mths
1) . . . . .	IPV	Hib, MMR, Pn, Var . . . . .	DTaP
2) . . . . .	. . . . .	Hib, IPV, MMR, Pn, Var . . . . .	DTaP
3) . . . . .	IPV	DTaP, Hib, MMR, Pn, Var . . . . .	
4) . . . . .	. . . . .	DTaP, Hib, IPV, MMR, Pn, Var.	
5) . . . . .	IPV	Hib, MMR, Var . . . . .	DTaP, Pn
7) Comvax	IPV	DTap, HepB, Hib, MMR, Pn, Var	
9) Comvax	IPV	HepB, Hib, Var, MMR . . . . .	DTaP, Pn
11) . . . . .	IPV	Hib, MMR, Pn, Var . . . . .	DTaP

Figure 6-6: Vaccine forecasting options

- **4-Day Grace Period**

The ACIP recommends that vaccine doses administered four days or less before the minimum interval or age be counted as valid. (Not all states accept this 4-Day Grace Period). The Forecasting Rules allow you to choose YES if you want to screen using the 4-Day Grace Period or to choose NO to adhere strictly to the recommended intervals.

**Note:** The 4-Day Grace Period does not affect vaccine forecasting, only screening for the validity of the dose administered.

- **HPV Vaccine Forecasting Option**

After you select the 4-day grace period option, a new prompt appears that allows you to forecast HPV vaccine for 11 to 18-year-olds or 11 to 26-year-olds. The ACIP recommends HPV for females 11 to 12 years with catch up for 13 to 26-year-olds. However, HPV is provided by the Vaccine for Children's Program only for 9 to 18-year-olds.

## 6.5.10 Lot Number Options

- **Required**

Indicates whether lot numbers are required when entering Immunization visits (Yes) or should be Optional (No). If lot numbers are required when entering Immunization visits, enter YES for this parameter. If lot numbers are Optional, enter NO.

**Note:** Lot numbers are not required for Immunizations with a Category of Historical Event, even if this site parameter is set to Yes.

- **Lot Number Low Supply Alert**

When the number of remaining doses of a given Lot falls below its Low Supply Alert (set by the manager when editing Lot Numbers), a Low Supply Alert pops up on the screen as a user is adding or editing an immunization with that particular Lot Number.

The number entered here, under the Site Parameters, is the Low Supply Alert DEFAULT. In the absence of a specific Low Supply Alert for a given Lot Number, this Default is used.

**Note:** No alert occurs if a Starting Amount is not entered for the particular lot number in the EDIT LOT NUMBER TABLE.

### 6.5.11 Age Appropriate for Pneumo

This is the adult age at which pneumococcal immunizations are to be routinely forecast. Typically this is set at 65 (or 55 years of age in Alaska). You can also designate whether to forecast every 6 years after this age (Alaska).

### 6.5.12 Forecasting (Imms Due)

This parameter indicates whether the IMMServe Forecasting program is properly installed (Enable) or not (Disable). If IMMServe is properly installed and Immunizations Due should be forecast when viewing and editing patient histories, printing Due Lists, and so on, choose Enable. If IMMServe is not installed, choose Disable. If at any point a forecasting error occurs, this is due to a problem with IMMServe. In this case, either IMMServe should be re-installed (see Installation Notes in the Technical Manual), or this parameter should be disabled until the problem is corrected by technical support.

### 6.5.13 Chart # with Dashes

This parameter indicates whether chart numbers, also known as Health Record Numbers or HRNs, are displayed with dashes throughout the Immunization Tracking System. For example,

- Chart number displayed without dashes: 12345
- Same Chart number displayed with dashes: 01-23-45

### 6.5.14 User as Default Provider

When entering new immunizations or new Skin Tests through the Immunization Tracking System, it is possible to have the user appear as the Default Provider. In other words, when the screen for a new visit first comes up, the Provider field is already filled with the user's name, where the user is the person logged on and entering the data.

This only occurs if the user is a provider (has the Provider Key). This does not occur on edits of pre-existing visits.

### 6.5.15 Immserve Directory

This is the directory where the IMMserve Forecasting files reside. In general this directory is determined and preset by the Immunization Package Installation and Instructions. For purposes of support, it's best to keep the standard directory designation. However, this parameter allows you to enter or edit a path other than the one expected, if necessary. (Path length may not be more than 70 characters long.)

The standard paths incorporate the Imm Package version number; for example,

- AIX: /usr/local/immserve821/
- NT/XP: C:\Program Files\Immserve821\

### 6.5.16 GPRA Communities

This parameter enables the Immunization Program Manager to build and maintain a list of communities to be used for GPRA purposes in reports, patient scans, and so on. This list is not affected by other RPMS GPRA software.

### 6.5.17 Inpatient Visit Check

When an Immunization Visit or Skin Test Visit is stored, the default visit category is Ambulatory (Outpatient). However, if the RPMS PIMS (Patient Information Management System) or various billing applications are in use, the patient may have the Status of Inpatient at the time of the visit.

To avoid conflicts that may arise from inpatient and ambulatory visits being listed for the same day, this software can check the Inpatient Status of the patient at the time of the immunization or skin test. If the patient is listed as an Inpatient at the time of the immunization, the software can automatically change the category from Ambulatory to Inpatient for the immunization.

Turn this feature on by setting Inpatient Visit Check to enable. If the Inpatient Visit Check feature is causing problems, however, (such as conflicts with Third-Party Billing software), then set the parameter to disable and no Inpatient check occurs.

### 6.5.18 High Risk Factor Check

When forecasting immunizations for a patient, this program looks at the patient's medical history (visits) and attempts to determine if the patient has an increased risk for influenza or pneumococcal disease. If the patient has two visits in the past three years for a High Risk condition, the program forecasts the patient as due for one or both of those immunizations. This parameter either enables or disables that feature.

### 6.5.19 Import CPT-coded Visits

In RPMS, it is possible for some immunizations to be entered by CPT Code into the CPT Visit File, rather than into the true Immunization Visit File. These CPT-coded immunizations do not appear on the patient's Immunization Profile, nor are they always included in the Immunization Package Reports.

When the Import CPT-coded Visits site parameter is enabled, those immunizations that are entered only as CPT Visits are checked and automatically entered into the proper Immunization Visits File if they do not already exist there.

If this parameter is disabled, the program makes no attempt to bring CPT-coded Visits into the Immunization files.

## 6.6 Package Setup Information (PKG)

The Package Setup Information (PKG) Manager menu option displays information about the Immunization Tracking System. It addresses software options and access to them, device information, handling of the old software, and reference to site parameters. Information in this Manager Menu option is intended for use by the site manager and the local/site programmer in setting up the new version and maintaining it. Figure 6-7 provides an example of this screen.

```
(Immunization v8.3)                Feb 17, 2008 16:33                Page:    1 of   18

                PACKAGE INFORMATION for IMMUNIZATION, Version 8.3

The text presented here is intended to provide Site Managers with
helpful information regarding setup and management of the RPMS
Immunization Package, version 8.3.

OPTIONS:
-----
The main menu Option for the Immunization module is BIMENU. At most
Sites this would be placed on AKMOCORE along with other RPMS modules.
For the sake of consistency from site to site, it is recommended that the
Synonym "IMM" (Immunization) be given to the main menu Option BIMENU,
However, this is not a requirement. BIMENU allows access to every other
Option within the module. (Keys: BIZMENU ,BIZ EDIT PATIENTS, and BIZ

+          Enter ?? for more actions                                P  Print this text.

Select Action: Quit//
```

Figure 6-7: Package information for the Immunization Tracking System

## 6.7 Form Letters Add/Edit (LET)

The Form Letters Add/Edit (LET) Manager menu option enables the manager to edit current form letters or create and save new form letters to use under the Letter Print Action on the Patient View screen or the Immunization Lists and Letters screen.

When you choose to add a new form letter this program loads a sample form letter, which you may then edit to suit the purpose of your new form letter. There are two sample form letters:

- Standard Due Letter
- Official Immunization Record

After you select a form letter, it is displayed on the View/Edit Form Letter screen where you can edit and save it as your new form letter.

The View/Edit Form Letter screen allows you to customize form letters.

- The top section of the screen displays the name of the form letter.
- The middle section of the screen displays the body of the letter in a scrollable region. Use the up and down arrow keys to view all parts of the letter.
- The bottom section of the screen lists actions you can take to edit sections of the letter or to print or delete the letter.

Fields in the letter appear in uppercase text within vertical bars, such as |PATIENT NAME|. These fields may be moved within the letter or they may be deleted. However, the text within the vertical bars must not be altered.

The form letter is divided into seven sections as shown in Figure 6-8. You can edit any portion of the sample letter to create your new form letter by entering the letter or word of the section (e.g., T or Top) at the prompt.

```

Top:
                                UNSPECIFIED Immies Clinic
                                123 MAIN ST
                                ANWHERE, USA  77777

[BI TODAY]

                                Date of Birth: [B1 DATE OF BIRTH]
                                Chart #: [B1 CHART NUMBER]

|BI PARENT/GUARDIAN|
|BI NAME FIRST LAST|
|BI MAILING ADD-STREET|
|BI MAILING ADD-STREET-2|
|BI MAILING ADD-CITY STATE ZIP|
Dear Parent or Guardian:
Your child, |BI NAME FIRST|, is due for immunizations. According to our records,
the following immunizations have already been received:
-----
history:

12-Aug-1994:  1-DTP, 1-OPV, 1-PEDVAXHIB, 1-HEP B VAC
10-Oct-1994:  2-DTP, 2-OPV, 2-PEDVAXHIB, 2-HEP B VAC
-----
middle:

|BI NAME FIRST| will be due for the immunizations listed below:
-----
forecast:

DTP
HEP B VAC
-----
bottom:

If you feel our records are not correct, please notify us so that we may make the
corrections to update our records. Otherwise, please come to our clinic.
We would surely appreciate you bringing your own personal immunization records so
that we can Update our records as well as your records!
-----
date/location:

10-Dec-1994 at UNSEPECIFIED Clinic, UNSPECIFIED Medical Center
-----
closing:

Sincerely,

Dr. Ralph Avritt
-----
+ Scroll down to view more. Type ?? for more actions

T Top          F Forecast      C Closing
H History      B Bottom        P Print Sample Letter
M Middle      D Date/Loc     X Delete Form Letter

Select Action: Quit//
    
```

Figure 6-8: Form letter add/edit screen



## 6.7.1 Form Letter Section Descriptions

- **T - Top:**

The Top section of the letter contains your address, today's date, and the patient's name, chart number, and address. You may edit any information of the Top using the Word Processor Help instructions in Appendix F: Word Processor Help. Today's date, the patient's name, address, phone number, and date of birth appear automatically as noted by the appropriate text inside brackets (e.g., [TODAY]).

**Note:** In version 8.1\*1 patch, the letters were enhanced to allow printing of a patient's second address line if they have one. The |BI MAILING ADD-STREET-2| line must be added manually to any existing letters, if this information is desired. Newly created form letters automatically have the patient's second address line.

- **H - History:**

The History section of the letter contains the patient's immunization history. You can change the immunization history (by date, by vaccine, and so on.). You can also choose to omit the immunization history from your form letter. This section also includes the patient's contraindications, if any.

- **M - Middle:**

The Middle section of the letter is free text. You can edit any portion of the middle section.

- **F - Forecast:**

The Forecast section of the letter contains the immunizations for which the child is due on the Forecast/Clinic date chosen in Immunization Lists and Letters. The Forecast does not show the series number, only the vaccines for which the patient is due. You may choose to omit the Forecast.

- **B - Bottom:**

The Bottom section of the letter is also free text. It can contain a line that reads: Current Next Appt: |BI NEXT APPOINTMENT|. If your site is running RPMS Scheduling, this field includes the patient's next scheduled appointment. If your site is not running RPMS Scheduling, this line does not print the patient's next appointment.

- **D - Date/Loc:**

The Date/Loc section of the letter gives the patient the Date and Location for the Immunization Clinic and can be used to request that the patient visit a specific clinic. This is a special section that may be edited by the user (clerk or clinic staff) at the time the letter is sent. It allows clinical staff to change the date, time, and location of an appointment on the fly when printing the letter without giving them access to edit the other 6 sections of the form letter. If you want to have the patient call for an appointment, you can include that message (e.g., Please call the Children's Clinic, 729-1000, for an appointment to get your child's immunizations update.) in the bottom section and you can eliminate this portion of the letter.

- **C - Closing:**

The Closing section contains your name and the name of the clinic. You may edit this section.

## 6.8 Lot Number Add/Edit (LOT)

The Lot Number Add/Edit (LOT) Manager menu option enables the manager to add or edit a current lot number for any vaccine in the Vaccine Table.

Version 8.3 includes a lot number inventory monitoring system. When the pharmacist/manager enters a lot number, they input the expiration date, source (VFC, non-VFC), available doses, unused doses, as well as a lot-specific low supply alert. The doses unused decreases each time a vaccine of that lot number is entered in RPMS as having been administered to a patient. The provider receives an alert notice if they enter an expired vaccine lot, or if the supply is low.

Selecting the LOT option displays the following screen:

```

1) By Unused Doses (least first)
2) By Expiration Date
3) By Lot Number
4) By Vaccine Name, then by Unused Doses
5) By Vaccine Name, then by Exp Date
6) By Vaccine Name, then by Lot Number

Immunization v8.3          May 31, 2008 16:21:10          Page:    1 of    3

          ANCH MED CTR
          -----
          EDIT LOT NUMBER TABLE
          (Listed by Lot Number)

#  Lot Number      Vaccine      MVX  Status   Exp Date  Start  Unused  Facility
1  RWETERT.....VARICELLA...ADA..Active...08/29/08..   6...   0.....
2  MMM78.....FLU-NASAL...CSL..Active...08/07/08..  60...  50.....
3  444.....VARICELLA...SKB..Active...05/27/07.. 300...  55.....
4  33333.....VARICELLA...JPN..Active...03/16/07.. 477...  89.....
5  4321.....PEDVAXHIB...BAY..Active...02/09/07.. 690... 427..ALASKA N.
6  444448.....VARICELLA...JPN..Active...02/14/07.. 3000... 451..KOTZEBUE.
7  433.....ADENOV,NOS..CSL..Active...08/20/08..  500... 500.....
8  555.....ADENOV,NOS..CSL..Active.....  500... 500.....
9  54Z8.....ADENOV,NOS..CSL..Active...08/13/08..  600... 599.....
10 12345.....MMR.....SI...Active...01/31/07..10000... 2376..KOTZEBUE.
11 888.....ACTHIB.....ADA..Active.....
12 3453.....ACTHIB.....ADA..Active.....

+          Scroll down to view more. Type ?? for more actions

A  Add/Edit Lot Number      E  Edit a Lot Number      I  Inactivate Old Lots
   C  Change List Order      H  Help

Select Action: Quit//VACCINE: HEPATITIS B IMMUNE GLOBULIN//
    
```

Figure 6-9: Lot Number list screen

The Lot Number Table lists the group of all ACTIVE Lot Numbers first, followed, optionally, by all INACTIVE Lot Numbers. However, within these two groups, you may select the order in which the Lot Numbers are displayed.

### 6.8.1 Lot Number Table

This Lot Number list screen enables you to add and edit the eight fields associated with each lot number.

To add or edit a particular lot number, type A and then enter the lot number. If the lot number already exists in the table, that lot number is displayed and you can edit its fields.

Alternatively, as a shortcut, you may select a lot number you see on the screen by typing S and then entering the number to the left of the lot number that corresponds to the one you want to edit.

You may inactivate all lot numbers that either have expired or have no expiration date automatically by typing I.

The fields for each lot number are:

- Lot Number
- Vaccine

This is the vaccine to which the lot number is assigned. A vaccine is *required* when entering a new lot number.

- Manufacturer (MVX)

This is the standard CDC/HL7 Manufacturer Code assigned to the company that produced the Lot. Enter ?? to view the entire Manufacturer Code list. A manufacturer is *required* when entering a new lot number.

- Status

If a lot number is set to Inactive, users cannot select it when entering *new* patient immunizations for this vaccine. However, previous immunizations with this lot number continue to show up on the patient histories.

Also, if you attempt to enter a lot number for a vaccine that is Inactive, a pop-up alert appears notifying you that the vaccine must first be made Active or that you must select a different vaccine.

- Expiration Date

This is the date that the lot expires.

- Starting Count

Total number of doses in the starting inventory for the lot when it was first received.

- Doses Unused

Number of doses of a lot remaining or unused. This number decreases each time an immunization using that lot number is entered into RPMS through the Immunization package or data entry. The pharmacist or user can also reset this number if it becomes incorrect, such as might occur with wasted doses, data entry errors, and so on.

**Note:** This number can be negative. A negative number for the Unused Amount indicates that deletions, data entry errors, or testing caused by subtraction each time the lot number is used in the computer – even if it is not actually used clinically. Therefore, it is entirely appropriate for the vaccine manager or pharmacist to correct the Number Unused to reflect the actual number of doses remaining in inventory (in other words, sitting on the shelf).

- Vaccine Source (C or non-VFC)
- Health Care Facility

Adding a Health Care Facility to a lot number causes that lot number to become unavailable for any user who is not logged on to the named facility.

In general, there is no need to assign lot numbers to specific facilities. However, if more than one facility uses the same computer (such as dialing in from remote sites), then it may be desirable to assign lot numbers to specific facilities. Then, users from another facility are prevented from erroneously using a lot number not assigned to their facility.

In cases where a lot number is shared by multiple facilities using the same computer, it may be desirable to create sub-Lots by appending a -a, -b, -c, and so on. to the lot number. For example, Facility A would get #1234-a, Facility B would get #1234-b, Facility C would get #1234-c, and so on.

This enables the manager or pharmacist to assign a starting amount for each sub-Lot to each facility and ensure that the inventory at each site is accurate. Figure 6-10 shows the screen for adding or editing lot numbers.

```

Imm v8.3                * * *  EDIT A LOT NUMBER  * * *

Lot Number:  33333
-----
Lot Number: 33333          Vaccine: VARICELLA
                        (VARICELLA)
Status: Active
Expiration Date: MAR 16,2007  Manufacturer: THE RESEARCH FOUNDATION
Source: VFC
Starting Count: 477      Doses Unused: 89      Doses Used: 388
Low Supply Alert:                               (calculated)

Facility:
-----
Enter/edit the Lot Number.

```

Figure 6-10: Lot number add/edit screen

## 6.8.2 New Lot Numbers

When lot numbers contain a mixture of letters and numbers, use all capital (uppercase) letters for lot numbers. Choose the manufacturers from the standard Manufacturer's list. Type ?? to obtain the entire Manufacturer's list.

## 6.8.3 Duplicate Lot Numbers

For several years, now, the software has not permitted duplicate lot numbers to be entered. In general, this is no longer an issue. However, in the event that duplicate lot numbers should show up on your system, there is a method to resolve the problem.

### To resolve duplicate lot numbers:

1. Enter the lot number in question. Two or more choices are presented.
2. Select one of the choices to be the valid lot number.
3. Edit this lot number, making sure it is active and that all relevant vaccines are listed under it.

- Select and edit each duplicate lot number by placing a z in front of the number (for example, change 483-116 to Z483-116).

If there is a second duplicate, add ZZ to the beginning of that lot number; for a third duplicate, add ZZZ, and so on. By adding leading Zs to the duplicates, the duplicates are easy to distinguishable from the valid lot number. This method also makes the old duplicate lot numbers recognizable on pre-existing visits.

- Make the duplicate lot numbers inactive. If an old visit is edited and it includes old duplicate lot numbers, the old duplicate should be replaced with the current valid lot number (easily recognized by ignoring the leading Zs).

## 6.9 Vaccine Table Edit (VAC)

The Vaccine Table Edit (VAC) Manager menu option enables the manager to edit five parameters of any vaccine. Figure 6-11 shows a sample of the table.

```

Immunization v8.3
                                INDIAN MED CTR
                                -----
                                EDIT VACCINE TABLE
-----
# Vaccine      CVX      Active      Lot# Dflt      VIS Dflt      Vol Dflt      Forecast
-----
1  ACTHIB.....(48)...Active.....987654321234...12/16/98..  .5 ml  ... YES
2  ADENOV,NOS..(82)...Inactive.....                .5 ml  ... YES
3  ADENOVI,T4..(54)...Inactive.....                .5 ml  ... YES
4  ADENOVI,T7..(55)...Inactive.....                .5 ml  ... YES
5  ANTHRAX....(24)...Inactive.....                .5 ml  ... YES
6  BCG.....(19)...Inactive.....                .5 ml  ... NO
7  BOTULINUM ..(27)...Active.....                .5 ml  ... YES
8  CHOLERA....(26)...Active.....                .5 ml  ... YES
9  CMVIG.....(29)...Active.....                .5 ml  ... YES
10 COMVAX.....(51)...Active.....123321456654...07/11/01..  .5 ml  ... YES
11 DENGUE FEV..(56)...Inactive.....                .5 ml  ... YES
12 DIPHTHERIA.(12)...Inactive.....                .5 ml  ... YES
13 DT-PEDS....(28)...Active.....                .5 ml  ... YES

+          Scroll down to view more. Type ?? for more actions

E  Edit Vaccine          C  Change List Order      H  Help
          F  Forecasting          P  Print List

Select Action: Quit//
    
```

Figure 6-11: Vaccine table edit screen

Selecting Change List Order action changes the sort order of the list between alphabetical (by name) and numerical (by CVX Code).

**To edit a particular vaccine:**

At the “Select Action” prompt, type E. Then select the number to the left of the vaccine that corresponds to the one you want to edit.

The following screen appears:

```
Imm v8.3t1                * * *  EDIT A VACCINE  * * *
Vaccine:  VARICELLA  (VARICELLA)
HL7/CVX:  21          Vaccine Group:  VAR
-----
      Default Lot#:  345FR2
                Status:  Active
VIS Default Date:  JAN 10,2007
      Default Volume:  .5    ml
-----
Select the Lot Number that should be the default for this vaccine.
```

Figure 6-12: Vaccine Edit screen

This screen includes the following fields:

- **Default Lot#**

This is the Lot# default that is automatically entered in the Lot# field for this vaccine when users add new immunizations for patients. The user, of course, can overwrite or delete the default if it is not correct.

- **Status**

If a vaccine is set to Inactive, users cannot enter new patient immunizations for this vaccine. However, previous immunizations with this vaccine continue to appear on the patient histories. The Program Manager should inactivate extra vaccines in a vaccine group (e.g. HepA NOS, HepB NOS), to minimize the number of vaccine options for providers.

- **VIS Default Date**

This is the Vaccine Information Statement (VIS) default Date (Date of publication, not date given to patient). It gets entered automatically in the VIS Date field when users add new immunizations for this vaccine.



- **Default Volume**

This is the default volume of the injection for the given vaccine. It gets entered automatically in the volume field when users are adding new immunizations for this vaccine.

### 6.9.1 Forecasting

For each Vaccine Group, forecasting may be turned on or off. This is done from the Edit Vaccine Group Forecasting screen shown in Figure 6-13. The Forecast column indicates whether a vaccine is forecasted (listed as due for patients) or not. Each vaccine belongs to a VACCINE GROUP, for example, the HEP A GROUP. Turning OFF forecasting for the HEP A Vaccine Group blocks all forecasting of any vaccines that contain Hep A vaccine. To change forecasting for a Vaccine Group, select the Forecasting Action at the bottom of the screen shown in Figure 6-13.

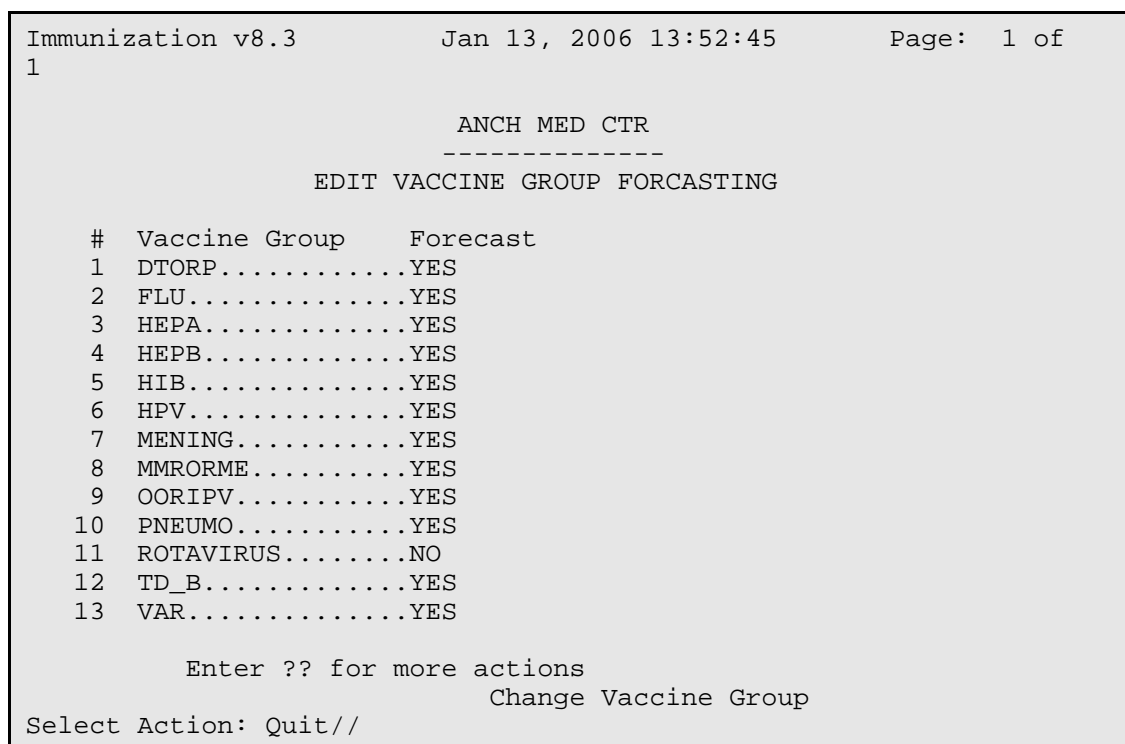


Figure 6-13: Vaccine table edit forecasting screen

**Note:** Combination vaccines cannot be forecast specifically – their component vaccines are forecast (if the patient is due). Use of combination vaccines is an option open to the provider. Inputting combination vaccines into the patient's history satisfies the requirements of the component vaccines.

## 6.10 Re-Standardize the Vaccine Table (RES)

The Immunization Package v8.3 comes includes a Vaccine Table (Immunization File), which is standardized with HL7/CVX codes consistent with the CDC's National Immunization Program (NIP) CVX Code set. There are several fields in the Vaccine Table that relate to functions in the package, most notably the IMMSeve Forecasting program. For this reason it is critically important that specific fields in the table are not altered.

Each time a user logs into the Immunization package, the Vaccine Table is checked for integrity. If certain fields are altered, a warning message is issued, and several functions within the package begin to display the warning. Some basic functions of the package continue to operate, such as the display of a patient's immunization history. Other functions only display the warning.

Figure 6-14 shows the text of the warning. (last paragraph does not appear, if the user does not have the BIZ MANAGER Key). As the warning indicates, re-standardizing the table simply involves selecting RES from the Manager Menu. This can be done at any time, and users need not log out of the package. Runtime lasts a few seconds at most.

```
WARNING

Vaccine Table (IMMUNIZATION File) is not standard--cannot proceed.
At this point you should back out of the Immunization Package
and contact your Site Manager or the person in charge of the
Immunization Software.

Or, you may fix this by Restandardizing the Immunization File.
To do so, proceed to the Manager Menu and select Restandardize.
(Menu Synonyms: MGR > RES)
```

Figure 6-14: Warning message

## 6.11 Export Immunizations (EXP)

The Export Immunizations (EXP) Manager menu option enables you to export demographic and immunization data for a selected group of patients to a file or to your screen. You can

- Select individual patients (by name or chart number), or select a group of patients by specifying Status in the Register, Visit History, Age Range, Facility, and Current Community. You can also limit the data export to specific vaccines.
- Export the data in an ASCII text format or IMMSeve data format.

At the Manager Menu, type EXP at the Select Manager Menu Option: prompt to display the Export Immunization Records screen shown in Figure 6-15.

```

Immunization v8.3
*   EXPORT IMMUNIZATION RECORDS   *

Do you wish to:

    1) Select patients INDIVIDUALLY by entering their Names or Chart Numbers
Or
    2) Select patients by GROUP, specifying Age Range, Status, Current
       Community, etc.

Enter either 1 or 2:
    
```

Figure 6-15: Export immunizations screen

### 6.11.1 Export Patients Individually

Typing 1 at the “Enter either 1 or 2” prompt displays the Export Data by Individuals screen; for example:

```

EXPORT DATA BY INDIVIDUALS

    1 - Survey Date.....: 01-Apr-1999
    2 - Patients.....: None
    3 - Immunizations Received...: ALL
    4 - Data Elements.....: None
    5 - File Format.....: ASCII
    6 - Output Device.....: SCREEN

        Select a left column number to change an item.
                                Export Data

Select Action: Quit//
    
```

Figure 6-16: Export data by individuals screen

- **Data Element (#4)**

This selection only pertains to exports with ASCII Format. (HL7 and IMM/Serve Data Elements are predetermined). The very first (or top) record lists, by title, the selected data elements (or fields) in the order in which they occur in the records.

**Note:** Immunization v8.3 contains some additional data elements (75 in all). Of particular significance to users who export data to CASA (an immunization program analysis tool) is the data element: VACCINE CODE, HL7-CVX LEADING ZERO. This places a leading zero at the beginning of any single-digit HL7-CVX code, which is a requirement of the CASA software.

- **File Format (#5)**

You may export records in either ASCII, IMM/Serve format. ASCII format positions the data elements you specify for each immunization on a separate line or record. Data elements are separated by quote-comma-quote (known as a CSV file). IMM/Serve is a commercial, vendor-specific format of use only to programmers working with this software.

- **Output Device (#6)**

You can export the data to your screen or to a file. Export to your screen (PC) allows you to view it, and then save it as a file. Export to a file allows you to copy it to a disk or transmit it to another computer for processing. When you select File and are asked to name it, your filename must conform to the naming convention of your operating system without slashes, colons, or spaces. The path is set in the Site Parameters (MGR > ESP) by your Site Manager or Program Manager.

## 6.11.2 Export by Group

The Export Data by Group screen provides options for exporting the data of groups of patients. There are nine screen options that you can change to specify which patients and data are to be exported, as well as the output device for the export.

Typing 2 at the “Enter either 1 or 2” prompt displays the Export Data by Group screen; for example:

```
EXPORT DATA BY GROUP

  1 - Survey Date.....: 01-Apr-1999
  2 - Age Range.....: 1-72 Months
  3 - Patient Group.....: ACTIVE in the Register.
  4 - Health Care Facility....: ALL
  5 - Community.....: ALL
  6 - Immunizations Received..: ALL
  7 - Data Elements.....: None
  8 - File Format.....: ASCII
  9 - Output Device.....: SCREEN

          Select a left column number to change an item.
                                Export Data
Select Action: Quit//
```

Figure 6-17: Export data by group screen

- **Patient Group (#3)**

The Patient Group can only be one of the following:

- Only patients who were active in the Immunization Register on the Survey Date.
- Both active and inactive patients in the Immunization Register.
- All patients who have had an immunization at the selected facility(s), including those not in the Immunization Register.

- **Health Care Facility (#4):**

If you select specific health care facilities, only patients with at least one immunization at one of the selected health care facilities are included in the export.

- **Community (#5)**

If you select for specific communities, only patients whose current community (under Patient Registration) is one of the selected communities are included in the export.

- **Immunizations Received (#6)**

If you select for specific vaccines, only immunizations given with the selected vaccines are included in the export.

Other parameters are similar to those in the Export Patients Individually option.

## 6.12 Allocate/De-Allocate Imm Menu Keys (KEY)

The Allocate/De-Allocate Imm Menu Keys Manager menu option enables the manager to give a user any one of three access levels to the system. Use this option assign the following security keys to users:

- **BIZMENU**

This key provides users access to the Main Menu of the New Immunization Tracking System (BIMENU) and its submenus for viewing patient data and reports. The BIZMENU Key does not provide any add or edit capabilities; however, holders of this key may print patient letters, view patient data, and run reports.

- **BIZ EDIT PATIENTS**

This key allows users to add and edit a patient's Immunization History, Contraindications, Skin Tests, Parent/Guardian, and so on. This key does not provide access to any additional menu options; instead, it adds several actions to the main Patient View screen. This key should be given to staff who are responsible for data entry and patient management.

- **BIZ MANAGER**

This key allows managers to access the Manager Menu (BI MENU-MANAGER), which is a submenu of the Main Menu (BIMENU). The Manager Menu provides access to many sensitive functions pertaining to Site Parameters, Form Letters, the Vaccine Table, Lot Numbers, Exports, and the allocation of Security Keys. The BIZ MANAGER Key should only be given to the manager of the Immunization Tracking System.

- **BIZ LOT ONLY**

This key allows someone, 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. The menu option named BI LOT NUMBER NON-MANAGER, which is locked by the Key BIZ LOT NON-MANAGER. This standalone option is not connected to the rest of the RPMS Immunization Menu; instead, it can be assigned to any menu of any user for the purpose of adding and editing lot numbers in the Immunization Package.

**Note:** Assignment of this option, BI LOT NUMBER NON-MANAGER, to other menus in RPMS is done by the local Site Manager, as is the key, BIZ LOT NON-MANAGER. This option and its key cannot be assigned from within the Immunization Package itself.

Figure 6-18 shows the Allocate/De-Allocate IMM Menu Keys screen.

```

                HOLDERS OF IMMUNIZATION KEYS AT INDIAN MED CTR
                -----
HOLDER          BIZMENU  BIZ EDIT PATIENTS  BIZ MANAGER  BIZ LOT ONLY
USER,CHRIS.....YES
USER,CYNTHIA .....YES
USER LAZELL .....YES.....YES.....YES
USER,ELLEN .....YES.....YES
USER,BARBARA .....YES
USER,ALFRED .....YES.....YES

+          Scroll down to view more.  Type ?? for more action
A  Add/Edit a Holder          E  Explanation of Keys          P  Print List

Select Action: Quit//
    
```

Figure 6-18: Allocation/De-allocation Immunization Keys screen

## 7.0 Rules of Behavior

The Resource and Patient Management (RPMS) system is a United States Department of Health and Human Services (HHS), Indian Health Service (IHS) information system that is FOR OFFICIAL USE ONLY. The RPMS system is subject to monitoring; therefore, no expectation of privacy shall be assumed. Individuals found performing unauthorized activities are subject to disciplinary action including criminal prosecution.

All users (Contractors and IHS Employees) of RPMS are provided a copy of the Rules of Behavior (RoB) and must acknowledge that they have received and read them prior to being granted access to a RPMS system, in accordance IHS policy.

- For a listing of general Rules of Behavior for all users, see the most recent edition of IHS General User Security Handbook (SOP 06-11a).
- For a listing of system administrators/managers rules, see the most recent edition of the IHS Technical and Managerial Handbook (SOP 06-11b).

Both documents are available at this IHS web site,

<http://security.ihs.gov/>

### 7.1 All RPMS Users

In addition to these rules, each application may include additional RoBs that may be defined within the documentation of that application (e.g., PCC, Dental, Pharmacy).

The Rules of Behavior listed in the following sections are specific to RPMS.

#### 7.1.1 Access

##### **RPMS Users Shall**

- Only use data for which you have been granted authorization.
- Only give information to personnel who have access authority and have a need to know.
- Always verify a caller's identification and job purpose with your supervisor or the entity provided as employer before providing any type of information system access, sensitive information, or non-public agency information.



- Be aware that personal use of information resources is authorized on a limited basis within the provisions Indian Health Manual Part 8, Information Resources Management, Chapter 6, Limited Personal Use of Information Technology Resources.

### **RPMS Users Shall NOT**

- Retrieve information for someone who does not have authority to access the information.
- Access, research, or change any user account, file, directory, table, or record not required to perform your OFFICIAL duties.
- Store sensitive files on a PC hard drive, or portable devices or media, if access to the PC or files cannot be physically or technically limited.
- Exceed their authorized access limits in RPMS by changing information or searching databases beyond the responsibilities of their job or by divulging information to anyone not authorized to know that information.

## **7.1.2 Information Accessibility**

RPMS shall restrict access to information based on the type and identity of the user. However, regardless of the type of user, access shall be restricted to the minimum level necessary to perform the job.

### **RPMS Users Shall**

- Access only those documents they created and those other documents to which they have a valid need-to-know and to which they have specifically granted access through an RPMS application based on their menus (job roles), keys, and FileMan access codes. Some users may be afforded additional privileges based on the function they perform such as system administrator or application administrator.
- Acquire a written preauthorization in accordance with IHS polices and procedures prior to interconnection to or transferring data from RPMS.

## **7.1.3 Accountability**

### **RPMS Users Shall**

- Behave in an ethical, technically proficient, informed, and trustworthy manner.
- Logout of the system whenever they leave the vicinity of their PC.
- Be alert to threats and vulnerabilities in the security of the system.

- Report all security incidents to their local Information System Security Officer (ISSO)
- Differentiate tasks and functions to ensure that no one person has sole access to or control over important resources.
- Protect all sensitive data entrusted to them as part of their government employment.
- Shall abide by all Department and Agency policies and procedures and guidelines related to ethics, conduct, behavior, and IT information processes.

#### 7.1.4 Confidentiality

##### **RPMS Users Shall**

- Be aware of the sensitivity of electronic and hardcopy information, and protect it accordingly.
- Store hardcopy reports/storage media containing confidential information in a locked room or cabinet.
- Erase sensitive data on storage media, prior to reusing or disposing of the media.
- Protect all RPMS terminals from public viewing at all times.
- Abide by all HIPAA regulations to ensure patient confidentiality.

##### **RPMS Users Shall NOT**

- Allow confidential information to remain on the PC screen when someone who is not authorized to that data is in the vicinity.
- Store sensitive files on a portable device or media without encrypting.

#### 7.1.5 Integrity

##### **RPMS Users Shall**

- Protect your system against viruses and similar malicious programs.
- Observe all software license agreements.
- Follow industry standard procedures for maintaining and managing RPMS hardware, operating system software, application software, and/or database software and database tables.
- Comply with all copyright regulations and license agreements associated with RPMS software.

**RPMS Users Shall NOT**

- Violate Federal copyright laws.
- Install or use unauthorized software within the system libraries or folders
- Use freeware, shareware, or public domain software on/with the system without your manager's written permission and without scanning it for viruses first.

**7.1.6 Logging On To the System****RPMS Users Shall**

- Have a unique User Identification/Account name and password.
- Be granted access based on authenticating the account name and password entered.
- Be locked out of an account after 5 successive failed login attempts within a specified time period (e.g., one hour).

**7.1.7 Passwords****RPMS Users Shall**

- Change passwords a minimum of every 90 days.
- Create passwords with a minimum of eight characters.
- If the system allows, use a combination of alpha, numeric characters for passwords, with at least one uppercase letter, one lower case letter, and one number. It is recommended, if possible, that a special character also be used in the password.
- Change vendor-supplied passwords immediately.
- Protect passwords by committing them to memory or store them in a safe place (do not store passwords in login scripts, or batch files.
- Change password immediately if password has been seen, guessed, or otherwise compromised; and report the compromise or suspected compromise to your ISSO.
- Keep user identifications (ID) and passwords confidential.

**RPMS Users Shall NOT**

- Use common words found in any dictionary as a password.

- Use obvious readable passwords or passwords that incorporate personal data elements (e.g., user's name, date of birth, address, telephone number, or social security number; names of children or spouses; favorite band, sports team, or automobile; or other personal attributes).
- Share passwords/IDs with anyone or accept the use of another's password/ID, even if offered.
- Reuse passwords. A new password must contain no more than five characters per 8 characters from the previous password.
- Post passwords.
- Keep a password list in an obvious place, such as under keyboards, in desk drawers, or in any other location where it might be disclosed.
- Give a password out over the phone.

### 7.1.8 Backups

#### **RPMS Users Shall**

- Plan for contingencies such as physical disasters, loss of processing, and disclosure of information by preparing alternate work strategies and system recovery mechanisms.
- Make backups of systems and files on a regular, defined basis.
- If possible, store backups away from the system in a secure environment.

### 7.1.9 Reporting

#### **RPMS Users Shall**

- Contact and inform your ISSO that you have identified an IT security incident and begin the reporting process by providing an IT Incident Reporting Form regarding this incident.
- Report security incidents as detailed in the IHS Incident Handling Guide (SOP 05-03).

#### **RPMS Users Shall NOT**

- Assume that someone else has already reported an incident. The risk of an incident going unreported far outweighs the possibility that an incident gets reported more than once

### 7.1.10 Session Time Outs

RPMS system implements system-based timeouts that back users out of a prompt after no more than 5 minutes of inactivity.

#### **RPMS Users Shall**

- Use a screen saver with password protection set to suspend operations at no greater than 10-minutes of inactivity. This prevents inappropriate access and viewing of any material displayed on your screen after some period of inactivity.

### 7.1.11 Hardware

#### **RPMS Users Shall**

- Avoid placing system equipment near obvious environmental hazards (e.g., water pipes).
- Keep an inventory of all system equipment.
- Keep records of maintenance/repairs performed on system equipment.

#### **RPMS Users Shall NOT**

- Eat or drink near system equipment

### 7.1.12 Awareness

#### **RPMS Users Shall**

- Participate in organization-wide security training as required.
- Read and adhere to security information pertaining to system hardware and software.
- Take the annual information security awareness.
- Read all applicable RPMS Manuals for the applications used in their jobs.

### 7.1.13 Remote Access

Each subscriber organization establishes its own policies for determining which employees may work at home or in other remote workplace locations. Any remote work arrangement should include policies that

- Are in writing.
- Provide authentication of the remote user through the use of ID and password or other acceptable technical means.

- Outline the work requirements and the security safeguards and procedures the employee is expected to follow.
- Ensure adequate storage of files, removal, and non-recovery of temporary files created in processing sensitive data, virus protection, intrusion detection, and provides physical security for government equipment and sensitive data.
- Establish mechanisms to back up data created and/or stored at alternate work locations.

#### **Remote RPMS Users Shall**

- Remotely access RPMS through a virtual private network (VPN) when ever possible. Use of direct dial in access must be justified and approved in writing and its use secured in accordance with industry best practices or government procedures.

#### **Remote RPMS Users Shall NOT**

- Disable any encryption established for network, internet, and web browser communications.

## 7.2 RPMS Developers

#### **RPMS Developers Users Shall**

- Always be mindful of protecting the confidentiality, availability, and integrity of RPMS when writing or revising code.
- Always follow the IHS RPMS Programming Standards and Conventions (SAC) when developing for RPMS.
- Only access information or code within the namespaces for which they have been assigned as part of their duties.
- Remember that all RPMS code is the property of the U.S. Government, not the developer.
- Shall not access live production systems without obtaining appropriate written access, shall only retain that access for the shortest period possible to accomplish the task that requires the access.
- Shall observe separation of duties policies and procedures to the fullest extent possible.
- Shall document or comment all changes to any RPMS software at the time the change or update is made. Documentation shall include the programmer's initials, date of change and reason for the change.

- Shall use checksums or other integrity mechanism when releasing their certified applications to assure the integrity of the routines within their RPMS applications.
- Shall follow industry best standards for systems they are assigned to develop or maintain; abide by all Department and Agency policies and procedures.
- Shall document and implement security processes whenever available.

#### **RPMS Developers Shall NOT**

- Write any code that adversely impacts RPMS, such as backdoor access, Easter eggs, time bombs, or any other malicious code or make inappropriate comments within the code, manuals, or help frames.
- Grant any user or system administrator access to RPMS unless proper documentation is provided.
- Not release any sensitive agency or patient information.

### **7.3 Privileged Users**

Personnel who have significant access to processes and data in RPMS, such as, system security administrators, systems administrators, and database administrators have added responsibilities to ensure the secure operation of RPMS.

#### **Privileged RPMS Users Shall**

- Verify that any user requesting access to any RPMS system has completed the appropriate access request forms.
- Ensure that government personnel and contractor personnel understand and comply with license requirements. End users, supervisors, and functional managers are ultimately responsible for this compliance.
- Advise the system owner on matters concerning information technology security.
- Assist the system owner in developing security plans, risk assessments, and supporting documentation for the certification and accreditation process.
- Ensure that any changes to RPMS that affect contingency and disaster recovery plans are conveyed to the person responsible for maintaining continuity of operations plans.
- Ensure that adequate physical and administrative safeguards are operational within their areas of responsibility and that access to information and data is restricted to authorized personnel on a need to know basis.
- Verify that users have received appropriate security training before allowing access to RPMS.

- Implement applicable security access procedures and mechanisms, incorporate appropriate levels of system auditing, and review audit logs.
- Document and investigate known or suspected security incidents or violations and report them to the ISSO, CISO, and systems owner.
- Protect the supervisor, superuser, or system administrator passwords.
- Avoid instances where the same individual has responsibility for several functions (i.e., transaction entry and transaction approval).
- Watch for unscheduled, unusual, and unauthorized programs.
- Help train system users on the appropriate use and security of the system.
- Establish protective controls to ensure the accountability, integrity, confidentiality, and availability of the system.
- Replace passwords when a compromise is suspected. Delete user accounts as quickly as possible from the time that the user is no longer authorized system. Passwords forgotten by their owner should be replaced, not reissued.
- Terminate user accounts when a user transfers or has been terminated. If the user has authority to grant authorizations to others, review these other authorizations. Retrieve any devices used to gain access to the system or equipment. Cancel logon IDs and passwords, and delete or reassign related active and back up files.
- Use a suspend program to prevent an unauthorized user from logging on with the current user's ID if the system is left on and unattended.
- Verify the identity of the user when resetting passwords. This can be done either in person or having the user answer a question that can be compared to one in the administrator's database.
- Shall follow industry best standards for systems they are assigned to; abide by all Department and Agency policies and procedures.

### **Privileged RPMS Users Shall NOT**

- Access any files, records, systems, etc., that are not explicitly needed to perform their duties
- Grant any user or system administrator access to RPMS unless proper documentation is provided.
- Not release any sensitive agency or patient information.



## 8.0 Glossary

### **Case Manager**

A user of the RPMS Immunization Tracking System responsible for managing patients. This includes immunization tracking and recall, entering or editing patient data, selecting appropriate letters, scanning for delinquent needs, and more.

### **Case Manager, Active**

Currently carrying a caseload; available for selection when editing a patient's Case Data.

### **Case Manager, Inactive**

Listed for historical purposes; cannot be entered/selected when editing a patient's Case Data.

### **Contraindication**

A symptom or condition that makes a particular procedure or treatment inadvisable.

### **Data Element**

A field in a record (e.g., patient record).

### **Due Dates**

Dates on which IMMSServe, a forecasting algorithm, has forecast immunizations as due.

### **Due Letter**

A letter generated and printed by the software that is sent to a patient containing information about immunizations that are due.

### **Export**

A process by which you can send a report to a file or to another computer, site, or agency.

### **File Format**

The layout and style in which data is formatted in a file for export or electronic transmittal.

**Forecast**

A projection of immunizations that are due and that date on which they should be administered.

**Health Summary**

A listing of patient information including demographic data, insurance, allergies, scheduled visits, in-hospital visits, outpatient/field visits, referred care, immunizations, health maintenance reminders, missed dental visits, Diabetes and Cancer summary information, mental health/social services data and a problem list.

**IMMServe**

Software that evaluates immunization histories and determines due dates.

**Immunization Rate**

The proportion of patients who received a specified vaccine or group of vaccines within a timeframe or by a certain age.

**Immunization Register**

Also known as Immunization Register; the subset of RPMS registered patients whose immunization administrations are actively being tracked/followed.

**Key**

A password that allows or restricts access to specific areas of functionality in the software.

**Location Type**

An identification of a location as an IHS facility or Other such as a private clinic or physician practice.

**Lot Number**

The number identifying a manufacturer's batch of a particular vaccine; important in the tracking of recipients of a specific batch with which a problem has been determined.

**Official Immunization**

The letter that presents all of a patient's Immunization information

**Output Device**

The equipment to which a file is sent; usually refers to a printer or to the computer monitor screen (Home).

**Patient, Active**

One who is being tracked and followed up on for immunization purposes because of age, vulnerability to disease, or both; generally those patients under a certain number of years of age (e.g., 7 or 8).

**Patient, Inactive**

One who is no longer being tracked or followed up on for immunization purposes; generally those patients beyond a certain number years of age (e.g., 7 or 8).

**PCC Category**

Patient Care Component category; that is, ambulatory, historical event, or inpatient.

**Program Manager**

The person chiefly responsible for the setup and operation of the RPMS Immunization Tracking System at a given site.

**Reaction**

An adverse response to the administration of an immunization.

**Record Letter**

Generally sent to schools, parents, other clinics, etc.

**Site Manager**

The person responsible for operation of the IHS site; determines and assigns access levels to site users.

**Site Parameters**

Settings that can be made by the Site Manager to customize the software and data to a particular site.

**Skin Test**

A subcutaneous test to determine delayed hypersensitivity and thereby exposure to an antigen (e.g., PPD).

**Statement**

Vaccine administered and documents the Date of Publication as evidence of Informed Consent for the vaccination.

**Translation Table**

A table that gives standard alternate names, maximum doses, series types, and HL7 codes for all vaccines; it explains the translation of the old vaccine names and codes in the Old Immunization Table to the new HL7 codes and names.

**Vaccine, Active**

Currently available; may be entered/selected when entering new immunizations.

**Vaccine, Inactive**

Listed only for historical purposes; no longer available as a valid choice.

**Vaccine Information Sheet (VIS)**

A statement provided to the parent of a patient that identifies each vaccine.

**Vaccine Table**

A standard list of all IHS vaccines and their HL7 codes.

## 9.0 Appendix A: Change History

### 9.1 Version 6.8 Changes

Version 6.8 features included the ability to track patients' immunization due dates, enter and edit patients' immunization histories, print due lists and letters, print a Quarterly Immunization Report of Age-Appropriate Immunizations, and print a Vaccine Accountability (Doses Administered) report.

### 9.2 Version 7.0 Changes

Version 7.0 contained the features that were found in the old version 6.8 of the Immunization software and many new or updated features. Immunization due dates were forecast by a regularly updated forecasting algorithm, ImmServe, developed and maintained by Medical Decision Associates. ImmServe also provided a detailed report or profile on each patient's immunization history and forecast. An unlimited number of letters could be created. An export function was developed. A new Two-Year-Old Report was added, which presented vaccine-specific and vaccine-combination reports of immunizations for two-year-olds to chart progress toward Year 2000 Health Objectives.

### 9.3 Version 7.1 Changes

Version 7.1 contained the following enhancements and updates to v7.0:

- **Updated Forecasting:** For polio, influenza (forecast at age 50), and rotavirus (inactivated).
- **Patient View Screen:** On the Patient View screen, in the Forecast section on the right hand side, the dates were removed because they caused confusion. Only the vaccines due on the date of the forecast are displayed.
- **Forecasting Options:** Nine forecasting rule sets are offered.

**Note:** In version 7.1, the Immunization package does not list Comvax as a separate vaccine. Comvax should be entered as PedvaxHIB and Hep B vaccines, using the same lot number to link the two vaccines.

- **Measles Dose Numbers:** A dose number was added to Measles.

- **Pneumococcal Conjugate Vaccine:** There are now two pneumococcal vaccines:
  - Pneumo-PS - (Pneumovax) - forecast for adults > 65 (in AK forecast >55, every 6 years)
  - Pneum-conj.- pneumococcal conjugate vaccine (Prenar) - forecast for children < 59 months of age
- **Reports:** Pneumococcal conjugate vaccine has been added to the Quarterly Immunization Report (however pneum-conj is not counted in the totals), the Two-Year-Old Report and the Vaccine Accountability Report.
- **Reports:** A Health Care Facilities parameter has been added to the Quarterly Immunization and the Two-Yr-Old Immunization Reports.
- **Letters:** If the RPMS Scheduling Package is being used at a site, you can now choose to have the patient's next scheduled appointment appear on a due letter. Next Appointment also appears at the bottom of the Patient View Screen, and is now an element that may be included in the Due List as Additional Information.
- **Export:** Two new data elements have been added to the Export: Mother's Maiden Name and Patient Beneficiary Type.
- **Data Entry:** If a patient is hospitalized and has not yet been discharged, the Immunization software ignores a hospitalization if it has a Visit Type as Contract.
- **Patient Menu Change:** Wording of options on the Patient Menu has been changed to Patient Lists and Letters to more clearly indicate that the Lists and Letters option is not limited to Due Lists.

## 9.4 Version 8.0 Changes

- **Combination Vaccines:** Every potential vaccine (CVX) code, including combination vaccines, are available for data entry. For combination vaccines, the nurse or data entry person can enter either the product name (e.g. Pediarix™) or antigens (e.g., DTaP-IPV-HepB). ImmServe forecasts the individual antigens and lists the individual antigens in their own series group on the vaccine history as shown in Figure 9-1.

Patient: DEMO,PATIENT		DOB: 21-Feb-2008 (6 mths)	
Chart#: 00-01-06 at DEMO HOSPITAL		Active	Female M HBsAg: UNK
#	Immunization History		Immunizations DUE on 09/16/2008
1	09/16/08 DTaP (PEDIARIX)	Alas	HIB,NOS past due PNEUM-CONJ past due
2	09/16/08 IPV (PEDIARIX)	Alas	FLU-SPLIT due
3	09/16/08 HEP B PED (PEDIARIX)	Alas	Last Letter: None
ADDITIONAL PATIENT INFORMATION			
-----			
Case Manager.....: REMILLARD,MICHAEL W			
Parent/Guardian.....:			
Current Community....: DEMO			

Figure 9-1 Combination Vaccines

- Combination vaccines are displayed in this way throughout the Immunization Package and split into their component antigens for all reports (except Vaccine Accountability Report).
- Combination vaccine can only be entered using one VIS date. In the future, the CDC hopes to have one VIS date for all childhood vaccines.
- The vaccine table, spellings, CVX codes, and CPT codes are taken directly from the CDC table <http://www.cdc.gov/vaccines/programs/iis/stds/cvx.htm>
- Contraindications to a combination vaccine prevent the forecast of the related antigens (e.g. Contraindication to Pediarix™ prevents forecast of DTaP, IPV, or Hib).
- **Dose Numbers:** There are no dose numbers on vaccines. Vaccines are forecast based only on the actual number of doses included in RPMS, and the age/intervals. All reports only count the number of doses in RPMS.
- **Age Dose Given:** The age at which the dose was given was added to the Health Summary.
- **Vaccine Forecasting Options:** There are 10 Vaccine Forecasting options. For each option, the site can choose whether to use the 4-day grace period. The forecasting options vary by use of Comvax, and by the recommended age for the 3rd IPV, 4th DTaP, final Hib, final Hep B, 4th Pn, MMR, and Varicella. The options are shown in Table 9-1.

**Table 9-1: Vaccine Forecasting Options**

Forecasting Option	6 Months	12 Months	15 Months
1)		IPV, MMR, Pn, Var	DTaP, Hib
2)		Hib, IPV, MMR, Pn, Var	DTaP
3)	IPV	DTaP, Hib, MMR, Pn, Var	
4)		DTaP, Hib, IPV, MMR, Pn, Var	
5)	IPV	Hib, MMR, Var	DTaP, Pn
6) Comvax		HepB, Hib, MMR, Pn, Var	DTaP, IPV
7) Comvax	IPV	DTap, HepB, Hib, MMR, Pn, Var	
8) Comvax		HepB, Hib, IPV, MMR, Pn	DTaP, Var
9) Comvax	IPV	HepB, Hib, Var, MMR	DTaP, Pn
10)	IPV	Hib, MMR, Pn	DTaP, Var

- Forecast Influenza in Children:** All children who are 6 to 23 months of age between September 1st and January 31st are forecast for a first dose of influenza during this time period. We do not have the sophistication to forecast a second dose the first year.
- Updated Adult Pneumococcal Forecasting:** Pneumococcal vaccine is forecast automatically at 65 years of age (or you can choose 55 years in the Managers' Menu) for all adults. Adults who receive a pneumococcal dose < 65 years of age have another dose forecast at 65 (or 55) years of age. In Alaska, you can choose to have pneumococcal vaccine forecast every 6 years after 55 years of age.
- Force Invalid/Valid Doses:** In the Edit Vaccine option there is an option to force a dose to be invalid (because it expired or had inappropriate temperature exposure) or to be valid (if it is invalid according to ImmServe because it does not meet minimum age/interval criteria, but it is valid in your State). The forced valid or invalid doses (determined by the ImmServe forecast or forced invalid by the provider) are tagged with an asterisk and brief explanation on the Health Summary and Vaccine History, but not on due letters.



## 9.4.1 Reports

### 9.4.1.1 Adult Report (New)

Prints a vaccine report using today's date for adults > 50 and adults >65 years with a visit to the reporting facility in the past year with the proportion who received:

- Influenza in past year
- Pneumo ever
- Pneumo in past 6 years
- Td in past 10 years

### 9.4.1.2 Two-Year-Old Report

Changes age range to 19 to 35 months to be consistent with age ranges for the National Immunization Survey.

### 9.4.1.3 Vaccine Accountability Report

- Does not show dose numbers
- Added location type so that providers can look at doses by PHN vs. IHS

### 9.4.1.4 Quarterly Report

- When you view the report, you can print a line list of:
  - a) patients on the report who are age-appropriate,
  - b) patients who are not age-appropriate, or
  - c) all patients included in the report.
- You can choose to include or exclude Hep A, Varicella and Pneumococcal vaccine in the total age-appropriate rate. Even if you exclude it in the total rate, the report still lists these vaccines individually.

### 9.4.1.5 Direct Data Entry

- Added fields for new options:
  - Forcing valid or invalid
  - Site/route of administration (e.g. Left thigh IM)
  - Dose amount (default 0.5cc for most)
- You can change default in Vaccine Edit Table (MGR > VAC)

- For entries other than today's date, the default is historical immunization
- Data entry screen is reorganized for more efficient navigation
- Standard Manufacturers Table: We use the standard Manufacturer's codes. Currently, providers have a non-standard Manufacturer's list.
- The new version only runs on the CACHE platform. Site Managers must have their systems upgraded from MSM to CACHE.
- Orphan Visits modified in PCC: The PCC Visit re-linking program in PCC was modified to link orphan or incomplete immunization visits created by direct data entry to a visit entered by data entry personnel which has a provider and purpose of visit. If the re-linker cannot link immunizations to a visit, then the PCC data entry staff can use a newly created option called Complete Orphaned Immunization Visits. This program assigns a purpose of visit and a provider of service to the visit. This option should be run only for a time period for which the data entry staff has completed all PCC forms to prevent automatically completing visits that can eventually be completed by the normal data entry process. (For example, if data entry is 2 weeks behind, then this option should be run for a time period that ends with a date that is 2 weeks ago).

## 9.5 Version 8.1

- **Combination Vaccines:** Every potential vaccine (CVX) code, including combination vaccines, is available for data entry.
- **Developing GPRA Communities Taxonomy:** After installing version 8.1, sites are prompted to develop their list of GPRA communities. The GPRA coordinators should be consulted to ensure that the list is consistent with the list used for GPRA indicators.
- **Automatic Activation into the Immunization Package:** The Not in Registry status no longer exists. New Scan feature searches the RPMS Patient Database for children who are less than 36-months-old and reside in GPRA communities for the facility and automatically enters them into the Register. Children already in the Register or residing outside of the GPRA communities are not affected. When you look up an inactive <36-month-old child in the Immunization Package, a prompt appears asking if you want to activate the child.
- **Inactivating Children:** To inactivate a patient, you must select a reason from a drop down menu. Reasons include: Moved Elsewhere, Treatment Elsewhere, Deceased, and Ineligible. If possible, add the location to which the patient moved and the provider's name if a patient is getting care elsewhere. For patients who were inactivated prior to Immunization v8.1, Previously Inactivated or Never Activated appears in the Reason for Inactivation field.

### 9.5.1 Patient Menu Changes

- When adding immunizations, if the category of Historical is entered or if the date is more than 5 days prior to today, the person entering the immunization is not automatically entered as the default provider.
- When a category of Historical is chosen on the Add/Edit an Immunization screen, inactive vaccines are available for selection.
- Risk Taxonomies now affect forecasting of Influenza and Pneumo. Other enhancements to forecasting of Pneumo and Influenza have been made (including forecasting Influenza through March 31).
- New fields are added for Skin Tests to record Site and Volume.
- TST-PPD can now be added as a contraindication (with a reason of Positive TB Skin Test).
- On the Patient View screen, new fields are displayed under Additional Information:
  - The Patient's Current Community is now displayed.
  - Date First Entered now appears with a method (automatically, manually).
  - Inactive Date now has a reason displayed with it.
  - Made Inactive by now appears with the name of the user.
  - Moved to/Tx Elsewhere now appears (text up to 50 characters).
  - High Risk Flu/Pneumo status is now displayed.
  - Forecast Flu/Pneumo now includes a Disregard High Risk option.
  - Pneumo Site Parameter is displayed for reference.
  - Next Appointment only displays if the Patient has one in RPMS.
- Logic to check Inpatient Status has been improved (and can be disabled via Manager Menu Edit Site Parameter option).
- Enhancements to Lists and Letters options:
  - Reason Inactivated can be selected as Additional Info.
  - On Patient Lists and Letters, Current Community automatically displays in the right-most column instead of Parent/Guardian (which has been moved to an Additional Information item to be added if desired).
  - A selectable Date Range has been added to the Immunizations Received parameter of the List and Letters.
  - Letters: A new template is available that lists Forecast first, then History. Also, contraindications that are Refusals no longer appear in printed letters.
  - Two new Patient Groups have been added to Lists and Letters: Automatically Activated and Refusals.
  - An Include Deceased parameter has been added to the Lists and Letters menu.

- Patient lookup automatically adds patients to the Register, with prompt for Active versus Inactive based on age.
- It is now possible to select for specific Immunizations Past Due.

### 9.5.2 Reports Menu Changes

- All reports now offer the opportunity to list all of the patients considered in the report, and to edit the patients' data individually from within the report.
- Immunization Package version number and patch number now appear at the top left of all printed reports.
- New Manager-edited Set of GPRA Communities can be selected for any reports in order to produce closer consistency with CRS reports.
- Number of Refusals appears at the bottom of relevant reports.
- New option in Two-Yr-Old Report allowing choice of either 19 to 35 month span or 24 to 35 month span.

### 9.5.3 Manager Menu Changes

- New Vaccines: Four new vaccines have been added to the Vaccine Table in keeping with the latest additions to the CDC NIH Standard Vaccine Table:
  - TETTOX, NOS (112)
  - Td-ADULTpf (113)
  - MENING-CV4 (114)
  - Tdap (115)
- Vaccine Forecasting Options: There are still 10 Vaccine Forecasting options; however, they have changed somewhat. For each option, the site can choose whether to use the 4-day grace period. The forecasting options vary by use of Comvax, and by the recommended age for the 3rd IPV, 4th DTaP, final Hib, final Hep B, 4th Pn, MMR, and Varicella. The options are shown in Figure 9-2.

	6 Mths	12 Mths	15 Mths	24 Mth
1) . . . . .	IPV	DTaP, Hib, MMR, Pn, Var . . . . .		Pn23
2) . . . . .	. . . . .	Hib, IPV, MMR, Pn, Var . . . . .	DTaP	
3) . . . . .	IPV	DTaP, Hib, MMR, Pn, Var . . . . .		
4) . . . . .	. . . . .	DTaP, Hib, IPV, MMR, Pn, Var . . . . .		
5) . . . . .	IPV	Hib, MMR, Var . . . . .	DTaP, Pn	
6) . . . . .	IPV	Hib, MMR, Pn . . . . .	DTaP, Var	
7) Comvax	IPV	DTap, HepB, Hib, MMR, Pn, Var . . . . .		
8) Comvax	. . . . .	HepB, Hib, IPV, MMR, Pn . . . . .	DTaP, Var	
9) Comvax	IPV	HepB, Hib, Var, MMR . . . . .	DTaP, Pn	
10) Comvax	. . . . .	HepB, Hib, IPV, MMR, Var . . . . .	DTaP, Pn	

All versions include DTaP for Infants and Hep A.

Figure 9-2 Vaccine forecasting options

- Forecasting On/Off by Vaccine Groups: There is a new screen to turn forecasting on or off for each Vaccine Group.
- The full vaccine name is displayed on the Edit a Vaccine screen.
- New Site Parameters:
  - GPRA Communities: New site parameter allows identifying a set of GPRA Communities to be used in reports.
  - Inpatient Visit Check: New site parameter to enable/disable the checking of a patient’s Inpatient Status when adding new immunization visits.
  - High Risk Factor Check: New site parameter to enable or disable the automated check on patients’ high risk status when forecasting.
  - Import CPT-Coded Visits: New site parameter to enable or disable the automated import of visits added only via CPT Coding and not through the Immunization Package or PCC Data Entry IM mnemonic.
- A minor problem with the Lot Number Add option was corrected (no longer prompts for multiple vaccines).
- Hep A Peds (31) no longer forecasts for patients 18 years of age and older, but can be translated to Hep A ADLT (52).
- Hep B Peds (8) no longer forecasts for patients 20 years of age and older, but can be translated to Hep B ADLT (43).
- New Scan feature searches the RPMS Patient Database for children who are less than 36 months old and automatically enters them into the Register.
- New Data Element HL7-CVX LEADING ZERO was added for exports to CASA.

#### 9.5.4 Other Changes

- The new PIMS API for creating visits is now used if present on the system.
- Most FileMan Database calls have been converted to employ the new Silent API Calls (in preparation for GUI interfaces).
- New programmer API call for GPRA Two-Year-Old Report (provides list of patients to other packages, i.e., CRS).
- New forecasting API for Health Maintenance Reminder software.
- Enhancement to handle extremely large patient histories in the forecasting string.
- Twenty (20) New Programmer Entry Points (PEPs) have been designed and documented for various calls by other software into the Immunization database. (These PEPs are documented in the Immunization Technical Manual and in the code).

## 10.0 Appendix B: Vaccine Table for v8.3

No.	Vaccine	HL7	Active	Default Lot#	VIS Default	Forecast
1	ACTHIB	(48)	Active	12/16/98	0.5 ml	YES
2	ADENOV,NOS	(82)	Inactive		0.5 ml	NO
3	ADENOVI,T4	(54)	Inactive		0.5 ml	NO
4	ADENOVI,T7	(55)	Inactive		0.5 ml	NO
5	ANTHRAX	(24)	Inactive	04/24/03	0.5 ml	NO
6	BCG	(19)	Inactive		0.5 ml	NO
7	BOTULINUM	(27)	Active		0.5 ml	NO
8	CHOLERA	(26)	Active		0.5 ml	NO
9	CMVIG	(29)	Active		0.5 ml	NO
10	COMVAX	(51)	Active	07/11/01	0.5 ml	NO
11	DENGUE FEV	(56)	Inactive		0.5 ml	NO
12	DIPHThERIA	(12)	Inactive		0.5 ml	NO
13	DT-PEDS	(28)	Active	06/10/98	0.5 ml	YES
14	DTaP	(20)	Active	07/30/01	0.5 ml	YES
15	DTAP,5PE	(106)	Inactive	07/30/01	0.5 ml	YES
16	DTAP,NOS	(107)	Inactive	07/30/01	0.5 ml	YES
17	DTAP-HIB	(50)	Inactive	07/30/01	0.5 ml	NO
18	DTP	(1)	Inactive	07/30/01	0.5 ml	YES
19	DTP-HIB	(22)	Inactive	07/30/01	0.5 ml	NO
20	DTP-HIB-HE	(102)	Inactive	07/30/01	0.5 ml	NO
21	FLU-NASAL	(111)	Active	06/30/06	0.5 ml	YES
22	FLU-SPLIT	(15)	Active	06/30/06	0.5 ml	YES
23	FLU-WHOLE	(16)	Inactive	05/06/0	0.5 ml	YES
24	HANTAVIRUS	(57)	Inactive		0.5 ml	NO
25	HBIG	(31)	Active		0.5 ml	YES
26	HEP A 2PED	(83)	Active	03/26/06	0.5 ml	YES
27	HEP A 3PED	(84)	Inactive	03/26/06	0.5 ml	YES
28	HEP A ADLT	(52)	Active	03/26/06	1.0 ml	YES
29	HEP A NOS	(85)	Inactive	03/26/06	0.5 ml	YES
30	HEP A PED	(31)	Inactive	03/26/06	0.5 ml	YES
31	HEP B ADLT	(43)	Active	07/11/0	1.0 ml	YES
32	HEP B ADOL	(42)	Inactive	07/11/0	0.5 ml	YES
33	HEP B DIAL.	(44)	Inactive	07/11/0	1.0 ml	YES
34	HEP B NOS	(45)	Inactive	07/11/0	0.5 ml	YES
35	HEP B PED	(8)	Active	07/11/0	0.5 ml	YES

No.	Vaccine	HL7	Active	Default Lot#	VIS Default	Forecast
36	HEP C	(58)	Inactive		0.5 ml	NO
37	HEP E	(59)	Inactive		0.5 ml	NO
38	HERPES SIM	(60)	Inactive		0.5 ml	NO
39	HIB NOS.	(17)	Inactive	12/16/98	0.5 ml	YES
40	HIBTITER	(47)	Active	12/16/98	0.5 ml	YES
41	HIV	(61)	Inactive		0.5 ml	NO
42	HPV-2	(118)	Inactive			YES
43	HPV-4	(62)	Active	02/02/07	0.5 ml	YES
44	IG	(86)	Active		0.5 ml	NO
45	IG,NOS	(14)	Inactive		0.5 ml	NO
46	IGIV	(87)	Active		0.5 ml	NO
47	INFLUENZA	(88)	Inactive		0.5 ml	YES
48	IPV	(10)	Active	01/01/00	0.5 ml	YES
49	JAPANESE E	(39)	Inactive	05/11/05	0.5 ml	NO
50	JUNIN VIRU	(63)	Inactive		0.5 ml	NO
51	LEISHMANIA	(64)	Inactive		0.5 ml	NO
52	LEPROSY	(65)	Inactive		0.5 ml	NO
53	LYME	(66)	Inactive		0.5 ml	NO
54	MALARIA	(67)	Inactive		0.5 ml	NO
55	MEASLES	(5)	Inactive	01/15/03	0.5 ml	YES
56	MELANOMA	(68)	Inactive		0.5 ml	NO
57	MEN-C CONJ	(103)	Inactive		0.5 ml	YES
58	MENING-CV4	(114)	Active	11/16/06	0.5 ml	YES
59	MENING-PS	(32)	Active	11/6/06	0.5 ml	YES
60	MENINGOCOC	(108)	Inactive		0.5 ml	YES
61	MMR	(3)	Active	01/15/03	0.5 ml	YES
62	MMRV	(94)	Active	01/10/07	0.5 ml	NO
63	MR	(4)	Inactive	01/15/03	0.5 ml	YES
64	MUMPS	(7)	Inactive	01/15/03	0.5 ml	YES
65	NO VACCINE	(998)	Inactive		0.5 ml	NO
66	OPV	(2)	Inactive	01/01/00	0.5 ml	YES
67	OTHER	(999)	Inactive		0.5 ml	NO
68	PARAINFLUE	(69)	Inactive		0.5 ml	NO
69	PEDIARIX	(110)	Active	07/30/01	0.5 ml	NO
70	PEDVAXHIB	(49)	Active	12/16/98	0.5 ml	YES
71	PENTACEL	(120)	Inactive	07/30/01	0.5 ml	NO
72	PERTUSSIS	(11)	Inactive		0.5 ml	NO
73	PLAGUE	(23)	Inactive		0.5 ml	NO
74	PNEUM-CONJ	(100)	Active	09/30/02	0.5 ml	YES
75	PNEUMO-PS	(33)	Active	07/29/97	0.5 ml	YES



No.	Vaccine	HL7	Active	Default Lot#	VIS Default	Forecast
76	PNEUMOCOCC	(109)	Inactive		0.5 ml	NO
77	POLIO NOS	(89)	Inactive	01/01/00	0.5 ml	YES
78	PROHIBIT	(46)	Inactive	12/16/98	0.5 ml	YES
79	Q FEVER	(70)	Inactive		0.5 ml	NO
80	RABIES,ID	(40)	Active	01/12/06	0.5 ml	NO
81	RABIES,IM	(18)	Active	01/12/06	0.5 ml	NO
82	RABIES,NOS	(90)	Inactive	01/12/06	0.5 ml	NO
83	RESERVED	(99)	Inactive		0.5 ml	NO
84	RHEUMATIC	(72)	Inactive		0.5 ml	NO
85	RIFT VALLE	(73)	Inactive		0.5 ml	NO
86	RIG	(34)	Active		0.5 ml	NO
87	ROTA-MONO	(119)	Inactive			YES
88	ROTA-NOS	(122)	Inactive			YES
89	ROTA-PENT.	(116)	Active	04/12/06	2.0 ml	YES
90	ROTA-TETRA.	(74)	Inactive		0.5 ml	YES
91	RSV-IGIV	(71)	Inactive		0.5 ml	NO
92	RSV-MAb.	(93)	Active		0.5 ml	NO
93	RUBELLA	(6)	Inactive	01/15/03	0.5 ml	YES
94	RUBELLA/MU	(38)	Inactive	01/15/03	0.5 ml	NO
95	SMALLPOX	(75)	Inactive	01/16/03	0.5 ml	NO
96	SMALLPOX,D	(105)	Inactive		0.5 ml	NO
97	STAPHYLOCO	(76)	Inactive		0.5 ml	NO
98	Td-ADULT	(9)	Active	06/10/94	0.5 ml	YES
99	Td-ADULTpf	(113)	Active	06/10/94	0.5 ml	YES
100	Tdap	(115)	Active	07/12/06	0.5 ml	YES
101	TET TOX	(35)	Active	06/10/94	0.5 ml	YES
102	TETTOX,NOS	(112)	Inactive		0.5 ml	YES
103	TICK-BORNE	(77)	Inactive		0.5 ml	NO
104	TIG	(13)	Active		0.5 ml	NO
105	TST,NOS	(98)	Inactive		0.5 ml	NO
106	TST-OT TIN	(95)	Inactive		0.5 ml	NO
107	TST-PPD	(96)	Active		0.5 ml	NO
108	TST-PPD TI	(97)	Inactive		0.5 ml	NO
109	TULAREMIA	(78)	Inactive		0.5 ml	NO
110	TWINRIX	(104)	Active	03/26/06	0.5 ml	NO
111	TYPHOID,N	(91)	Active	05/19/04	0.5 ml	NO
112	TYPHOID,OR	(25)	Active	05/19/04	0.5 ml	NO
113	TYPHOID,PA	(41)	Active	05/19/04	0.5 ml	NO
114	TYPHOID,PM	(53)	Active	05/19/04	0.5 ml	NO
115	TYPHOID,VI	(101)	Active	05/19/04	0.5 ml	NO

No.	Vaccine	HL7	Active	Default Lot#	VIS Default	Forecast
116	VACCINIA	(79)	Active		0.5 ml	NO
117	VARICELLA	(21)	Active	01/10/07	0.5 ml	YES
118	VEE, INACT	(81)	Inactive		0.5 ml	NO
119	VEE, LIVE	(80)	Inactive		0.5 ml	NO
120	VEE, NOS.	(92)	Inactive		0.5 ml	NO
121	VZIG	(36)	Inactive		0.5 ml	NO
122	VZIG-IND.	(117)	Active			YES
123	YELLOW FEV.	(37)	Active	11/03/04	0.5 ml	NO
124	ZOSTER	(121)	Active			

## 11.0 Appendix C: IMMserve

### 11.1 Vaccine Forecasting Rules

These parameters are in the IMM/Def Table and are used for forecasting vaccine doses.

**Table 11-1: Vaccine Forecasting Rules**

Vaccine Dose	Acceptable Age	Recommended Age	Past Due Age	Minimum wait since last dose	Maximum Age
HBIG	0M	0M			7D
HepB1	0M	0M	3M		18Y
HepB2	4W	4W	5M	4W	18Y
HepB3	24 W	6M or 12 M	13M	8W	18Y
DTorP1	6W	6W or 2M	3M		(7Y)
DTorP2	10W	4M	5M	4W	(7Y)
DTorP3	14W	6M	7M	4W	(7Y)
DTorP4	12M	12 or 15M	19M	6M*	(7Y)
DTorP5	4Y	4Y	6Y	6M	(7Y)
Tdap adol.	11Y	11Y		5Y	18Y
Tdap adult	19Y	19Y		10Y	64Y
TD_B	21 Y	(65Y)		10Y	
Hib1	6W	6W or 2M	3M		59M
Hib2	10W	4M	5M	4W	59M
HibTITER3	14W	6M	7M	4W	59M
HibTITER4	12M	12 or 15M	16M	8W	59M
PedvaxHIB3	12M	12M	16M	8W	59M
IPV1	6W	6W or 2M	3M		18Y
IPV2	10W	4M	5M	4W	18Y
IPV3	14W	6,12, or 15M	19M	4W	18Y
IPV4	4Y**	4Y	6Y	4W	18Y
Pneum-conj	6W	6W or 2M	3M	4W	59M
Pneum-conj	10W	4M	5M	4W	59M
Pneum-conj	14W	6M	7M	4W	59M
Pneum-conj	12M	12Mor 15M	16M	8W	59M
Rota1	6W	6W or 2M	3M		12W
Rota2	10W	4M	5M	4W	32W
Rota3	14W	6M	7M	4W	32W
MMR1	12M	12 or 15M	16M		18Y

Vaccine Dose	Acceptable Age	Recommended Age	Past Due Age	Minimum wait since last dose	Maximum Age
MMR2	4Y***	4Y	6Y	4W	18Y
Varicella1	12M	12M	19M		18Y
Varicella2	13M	4Y	6Y	3M (4W>13Y)	18Y
HepA1	12M	15M	25M		18Y
HepA2	18M	21M		6M	
Influenza	6M	6M		4W	59M
Mening CV4	11Y	11Y			15Y
HPV1	9Y	11Y			26Y or 18Y
HPV2	9Y	11Y		4W	26Y or 19Y
HPV3	9Y	11Y		12W	26Y or 19Y

\*For screening table, minimum interval is 4 months (-4 days if 4 day grace period).

\*\*For screening table, minimum age is 18 weeks (-4 days if 4 day grace period).

\*\*\*For screening table, minimum age is 13 months (if first dose given at 12 months).

## 11.2 Options for Customizing Vaccine Forecasting

Forecasting options are listed in the Edit Site Parameters option of the Manager's Menu (MGR > ESP). Parameter 8 allows the Program Manager to choose to forecast due dates at the Acceptable Age or at the Recommended Age. Parameter 9 allows the Program Manager to choose a set of IMMSServe Forecasting Rules.

## 11.3 Forecasting Adult Vaccines

The new Immunization software forecasts the minimum Adult Vaccines, including:

- Tdap is forecast one time for persons between 11 and 64 years of age. Tdap is forecast for 11 to 18-year-olds if >5 years have elapsed since the last DT containing vaccine, and is forecast for 19 to 64-year-olds if >10 years have elapsed since the last DT containing vaccine.
- Influenza vaccine – forecast each year for persons over 50 years of age. Influenza is forecast for persons 2 to 49 years of age who have had two visits in the past three years for a high-risk medical condition.
- Pneumococcal vaccine – forecast for persons over 65 (55) years of age. Pneumococcal vaccine is also forecast for persons 5 to 64 (55) years of age who have had two visits in the past three years for a high-risk medical condition.
- HepB – forecast for adults who received a dose at an age younger than 18-years-old.

## 11.4 Forecasting Options

Options 1, 3, 5, 7, 9 and 11 forecast the first vaccines series at 6 weeks; the others beginning at 2 months. All options forecast Rotavirus at 2 (6 wks), 4, and 6 months, Hep A starting at 15 months, and Influenza between Sept and March for children 6 months-18 years. Option 11 does not forecast Hep A or Hep B in persons over 18 years, regardless of prior doses. All options forecast Tdap, MCV4, and HPV for adolescents per ACIP recs.

Adult vaccine options: Tdap-Adult -forecast every 10 years starting at 11 years of age (Td forecast  $\geq 65$ yr). Influenza vaccine - ( $\geq 50$ ) forecast turned on 9/1/-12/31.  
Pneumococcal - forecast  $\geq 65$  or  $\geq 55$  yrs.

Table 11-2 shows the vaccines in each option, and Table 11-3 shows the current forecasting options.

**Table 11-2: Forecasting Options Descriptions**

Option	Vaccine Combination
Option 1	6m IPV; 12m Hib, MMR, Var Pn 15m DTaP
Option 2	12m IPV, Hib, Var, MMR, Pn, 15m DTaP
Option 3	6m IPV 12m DTaP, Hib, Var, MMR, Pn
Option 4	12m DTaP, Hib, IPV, MMR, Var, Pn
Option 5	6m IPV 12m Hib, MMR Var, 15m DTaP, Pn
Option 7	Comvax, 6m IPV 12m HepB, Hib, DTaP, Pn MMR, Var,
Option 9	Comvax 6m IPV 12m HepB, Hib Var MMR 15m DTaP, Pn
Option 11	6m IPV 12m Hib, MMR, Var, Pn 15m DTaP

**Table 11-3: Example of the current set of IMMServe forecasting rules**

Vaccine	Option 1	Option 2	Option 3	Option 4	Option 5	Option 7	Option 9	Option 11
HepB 1	0M	0M	0M	0M	0M	0M	0M	0M
HepB 2	6W	2M	6W	2M	6W	6W	6W	6W
HepB 3	6M	6M	6M	6M	6M	12M	12M	6M
DTorP 1	6W	2M	6W	2M	6W	6W	6W	6W
DTorP 2	4M	4M	4M	4M	4M	4M	4M	4M
DTorP 3	6M	6M	6M	6M	6M	6M	6M	6M
DTorP 4	15M	15M	15M	15M	15M	15M	15M	15M
DTorP 5	4Y	4Y	4Y	4Y	4Y	4Y	4Y	<b>4Y</b>
Tdap	11Y	11Y	11Y	11Y	11Y	11Y	<b>11Y</b>	<b>11Y</b>
Hib 1	6W	2M	6W	2M	6W	<b>6WPedvax</b>	<b>6WPedvax</b>	<b>6W</b>
Hib 2	4M	4M	4M	4M	<b>4M</b>	4MPedvax	4MPedvax	4M
Hib3HboC	6M	6M	6M	<b>6M</b>	6M			<b>6M</b>
Hib 4 (3)	12M	12M	12M	12M	12M	12MPedvax	12MPedvax	12M
IPV 1	<b>6W</b>	2M	6W	2M	6W	6W	6W	6W
IPV 2	4M	4M	4M	4M	4M	4M	4M	4M
IPV 3	6M	12M	6M	12M	6M	6M	6M	<b>6M</b>
IPV 4	4Y	4Y	4Y	4Y	4Y	4Y	<b>4Y</b>	4Y
MMR 1	12M	12M	12M	12M	12M	<b>12M</b>	12M	12M
MMR 2	4Y	4Y	4Y	4Y	<b>4Y</b>	4Y	4Y	4Y
Varicella1	12M	12M	12M	<b>12M</b>	12M	12M	12M	12M
Varicella2	4Y	4Y	<b>4Y</b>	4Y	4Y	4Y	4Y	4Y
HepA 1	15M	<b>15M</b>	15M	15M	15M	15M	15M	15M
HepA 2	<b>21M</b>	21M	21M	21M	21M	21M	21M	21M
PCV7	6W	2M	6W	2M	6W	6W	6W	6W
PCV7 2	4M	4M	4M	4M	4M	4M	4M	<b>4M</b>
PCV7 3	6M	6M	6M	6M	6M	6M	6M	<b>6M</b>
PCV7 4	12M	12M	12M	12M	15M	12M	15M	<b>12M</b>
Rota 1	6W	2M	6W	2M	6W	6W	<b>6W</b>	6W
Rota 2	4M	4M	4M	4M	4M	<b>4M</b>	4M	4M
Rota 3	6M	6M	6M	6M	<b>6M</b>	6M	6M	6M
MenCV4	11	15Y	11	15Y	11	15Y	11	15Y
**Flu	50Y	<b>50Y</b>	50Y	50Y	50Y	50Y	50Y	50
**PneuPS	65Y	65Y	65Y	65Y	65Y	65Y	65Y	65Y

\*Option 11 forecasts the same as Option 1; however, it does not forecast Hep A or Hep B in any person > 19 years

\*\*Flu and Pneumo are forecast in 5-50 (65) year old persons with 2 visits in the past 3 years for a high risk condition. Pneumo is forecast >65 for all with no Pneumo vaccine within 5 years.

## 12.0 Appendix D: High Risk ICD-9 Codes

### Taxonomy of High Risk ICD-9 Codes

This appendix lists the ICD-9 Codes used to trigger the forecast of Flu and Pneumo immunizations in high risk persons who are not automatically forecast by their age.

### 12.1 Influenza

Persons 3 to 49 years who have 2 or more visits in the past 3 years with a diagnosis ICD-9 code in Table 12-1 are forecast for Influenza vaccine.

**Table 12-1: Influenza Vaccine High Risk Taxonomies (1/2/06) with ICD 9 Codes and Definitions**

ICD 9 Code	Definition
042.0-043.09, 044.9	HIV Infection
250.00-250.93	Diabetes
393.-398.99	Rheumatic Heart D
402.00-402.91	Hypertensive HD
404.00-404.93	Hyperten Heart/Renal
410.00-414.9	Ischemic HD
415.0-416.9	Pulmonary HD
424.0-424.9	Other Endocardial HD
425.0-425.9	Cardiomyopathy
428.0-428.9, 429.2	CHF
491.0-491.9	Chronic Bronchitis
492.0-492.8	Emphysema
493.00-493.91	Asthma
494.0-496.	Bronchiectasis, CLD, COPD
501-505	Pneumoconioses
571.0-571.9	Chronic Liver Dis.
581.0-581.9	Nephrotic Syndrome
585.	Renal Failure
996.80-996.89	Transplant
V42.0-V42.89	Kidney Transplant
V58.3	Chemotherapy
V67.2	Chemotherapy f/u

## 12.2 Pneumococcal

Persons 5 to 64 years who have 2 or more visits in the past 3 years with a diagnosis ICD-9 code in Table 12-2 are forecast for Pneumococcal vaccine.

**Table 12-2: Pneumococcal Vaccine High Risk Taxonomies (1/2/06) with ICD 9 Codes and Definitions**

ICD 9 Code	Definition
042.0-043.09, 044.9	HIV infection
250.00-250.93	Diabetes
303.90-303.91	Alcohol Dependency
428.0-428.9, 429.2	CHF
492.0-492.8	Emphysema
494.0-496.	Bronchiectasis, CLD, COPD
501-505	Pneumoconioses
571.0-571.9	Chronic Liver Dis.
581.0-581.9	Nephrotic Syndrome
585.	Renal Failure
865.00 - 865.19	Spleen Injury
996.80-996.89	Transplant
V42.0-V42.89	Kidney Transplant
V58.3	Chemotherapy
V67.2	Chemotherapy f/u



## 13.0 Appendix E: Package Setup Information

This appendix contains print-screen of the entire text of the Package Setup Information that is presented under the PKG - Package Setup Information option of the Manager Menu (MGR > PKG).

### Setup Information for Version 8.3

The text presented here is intended to provide Site Managers with helpful information regarding setup and management of the RPMS Immunization Package version 8.3.

## 13.1 Options

The main menu option for the Immunization package is BIMENU. At most sites this would be placed on AKMOCORE along with other RPMS packages. For the sake of consistency from site to site, it is recommended that the synonym IMM (Immunization) be given to the Main Menu option BIMENU. However, this is not a requirement. BIMENU allows access to every other option within the package. (The Package Keys, BIZMENU, BIZ EDIT PATIENTS, and BIZ MANAGER, are discussed below under Security in Section II).

The option BI PATIENT VIEW/EDIT, Patient Immunization Record, is the main option for all users to view a patient's immunization data. This option allows users to display or print the patient's Immunization History and Forecast, Official Immunization Record, and Health Summary. If the user has the appropriate key (BIZ EDIT PATIENTS), additional actions for adding or editing patient data are made available under this option.

**Note:** Users accessing this option have no Add/Edit capability whatsoever - it provides informational only - unless they have the BIZ EDIT PATIENTS Key, in which case additional Add/Edit Actions are available (see Section 13.2, Security, for more information).

This option may be attached to any other Kernel menu and need not be accessed via the main menu, BIMENU. This option is found within the package under the Patient Menu of the Immunization Main Menu.

After this package has been installed and the BIMENU and BI PATIENT VIEW/EDIT options added to the appropriate menus, it is a good idea to run the Build Primary Menu Trees option under Kernel Menu Management (under AKMOEVE). This enables users to jump to menu synonyms within the new Immunization Package.

There is also an option called BI LOT NUMBER NON-MANAGER, which is locked by the Key BIZ LOT NON-MANAGER. This stand-alone option is not connected to the rest of the RPMS Immunization Menu; instead, it may be assigned to any menu of any user for the purpose of adding and editing lot numbers in the Immunization Package. The option allows someone, 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.

## 13.2 Security

The Security Key BIZMENU allows users to access the Main Menu of the RPMS Immunization Package, BIMENU, and its submenus for viewing patient data and reports. The BIZMENU Key does not provide any add or edit capabilities; however, holders of this key may print patient letters, view patient data, and run reports.

The Security Key BIZ EDIT PATIENTS allows users to add and edit a patient's Immunization History, Contraindications, Skin Tests, Parent/Guardian, etc. This key does not provide access to any additional menu options; instead, it adds several Actions to the main Patient View screen. This key should be given to staff that are responsible for data entry and Patient Management.

The security key BIZ MANAGER allows a user to access the Manager Menu (BIMENU-MANAGER), which is a submenu of the Main Menu (BIMENU). The Manager Menu provides access to many sensitive functions pertaining to Site Parameters, Form Letters, the Vaccine Table, Lot Numbers, Exports, and the allocation of Security Keys.

The BIZ MANAGER Key should only be given to the manager of the Immunization Package.

Also see Explanation of Keys Action on the HOLDERS OF IMMUNIZATION KEYS Screen (MGR > KEY > EXP).

**Note:** Assignment of the option, BI LOT NUMBER NON-MANAGER, to other menus in RPMS is done by the local Site Manager, as is the key, BIZ LOT NON-MANAGER. This option and its key cannot be assigned from within the Immunization Package itself.

## 13.3 Devices

This package makes extensive use of the VA Screen Manager and List Manager, which requires that several of the cursor and screen handling fields of the Terminal Type file be present for any Device accessing the package. It is recommended that any Device accessing this package be given a Terminal Type (Subtype) of C-VT100, since the standard VA Kernel distribution comes with all necessary codes pre-loaded. If the Terminal Type does not contain a complete set of screen handling codes, the user receives a message that ScreenMan cannot load the form.

If you suspect that the screen handling codes for C-VT100 on your system are not complete, this package comes with a routine, BIVT100, which updates (as of 2000) your VT100 codes. The routine must be run by a programmer or experienced Site Manager from Programmer Mode, and a line with ZIS must be uncommented.

Other Terminal Types may also be chosen. However, you may need to enter the screen handling codes for Cursor movements, PF keys, Erase Entire Page, and so on, manually if they are not already present for the selected Terminal Type.

If for some reason it is not practical to define Devices accessing the package with a Subtype of C-VT100, users of the package may be given a DEFAULT TERMINAL TYPE FOR LM in the NEW PERSON File #200 of C-VT100. (They are then given a Terminal Type of C-VT100 regardless of which DEVICE they sign on through). It may also be necessary to set the field ASK DEVICE TYPE AT SIGN-ON (again in file #200) equal to ASK to get a user's Terminal Type to change to the C-VT100.

It is important that PCs accessing this software through terminal emulation software have their function keys F1-F4 set to transmit standard VT-100 codes for these keys rather than other customized codes.

This software makes use of basic character format codes such as Reverse Video, Highlight, and Underlining. It may be helpful to adjust the colors that the terminal emulation software employs to display these formats.

There are several network terminal emulation programs available, however many of them have limitations such as not recognizing function keys, not displaying reverse video, not slave printing, etc. As of this printing, we have found that NetTerm 4.2e available at a nominal cost from Intersoft International, Inc., via the WWW is among the best products for use with RPMS software. Trial versions may be obtained online at: <http://www.securenetterm.com/html/netterm.html>.

Initial difficulties with the screen handling codes for ScreenMan and ListMan are not specific to Immunization. However, if problems with the setup cannot be resolved, please contact your Computer Support staff for further assistance.

## 13.4 Site Parameters

As part of the installation of this new version of Immunization, the site parameters must be reviewed and edited.

The Site Parameter screen may be accessed from the programmer prompt by entering D ^BISITE (no quotes). It may also be accessed from within the Immunization menus by selecting Manager Menu from the Main Menu, and then selecting Edit Site Parameters (MGR > ESP). Help text is displayed during the edit each Site Parameter.

## 13.5 Vaccine Table

The Immunization Package version 8.3 comes with a Vaccine Table that has been standardized with the CDC's NIP HL7/CVX Code Table. The vaccine table, spellings, CVX codes and CPT codes are taken directly from the CDC table <http://www.cdc.gov/nip/registry/hl7/hl7-cvx.pdf>.

There are several new fields in the Vaccine Table that relate to new functions in the package, most notably the IMMServe Forecasting program. For this reason it is critically important that specific fields within the table not be altered.

Each time a user logs into the Immunization Package, the Vaccine Table is checked for integrity. If certain fields have been altered, a warning message is issued, and several functions within the package begin to display the warning. Some basic functions of the package continue to operate, such as the display of a patient's immunization history. Other functions only display the warning.

Listed below is the text of the warning. The last paragraph of the warning does not appear if the user does not have the BIZ MANAGER Key.). As the warning indicates, re-standardizing the table simply involves selecting RES from the Manager Menu. This can be done at any time, and users need not log out of the package. Runtime is a few seconds at most.

```

                                WARNING
                                -----

Vaccine Table (IMMUNIZATION File) is not standard--cannot proceed.

At this point you should back out of the Immunization Package and contact
your site manager or the person in charge of the Immunization Software.

Or, you may fix this by Re-standardizing the Immunization File. To do so,
proceed to the Manager Menu and select Re-standardize. (Menu Synonyms: MGR >
RES)
```

Figure 13-1 Warning screen

## 13.6 Duplicate Lot Numbers

Some sites have duplicate lot numbers in their IMMUNIZATION LOT File, which cause the storing of Immunizations in the V IMMUNIZATION File to fail. RPMS Immunization v8.3 recognizes duplicate lot numbers ahead of time and informs the user. If the user holds the BIZ MANAGER Key, the text shown in Figure 13-2 is displayed.

```
You have selected a "Duplicate Lot Number." This means that this
Lot Number exists at least one other time in the Lot Number file,
and the Immunization visit you are entering cannot be stored until
the duplicate has been resolved.
Two steps should be taken to resolve duplicate lot numbers:
Step 1:
Duplicate lot numbers are resolved using the Manager Menu, Lot Number
Add/Edit (MGR > LOT). Go to this option and enter the lot number in
question. Two or more choices are presented. Select one of the choices to be
the valid lot number. Edit this lot number, making sure it is active and
that all relevant vaccines are listed under it.
Step 2:
Select and edit each duplicate lot number.
Edit the lot number by typing Z at the beginning (for example, change 483-
116 to Z483-116). If there is a second duplicate, type ZZ to the beginning
of that lot number; for a third duplicate, type ZZZ and so on. Adding
leading Zs to the duplicate lot numbers makes them distinguishable from the
valid lot number. This method also makes the old duplicate lot numbers
recognizable on pre-existing visits.
The duplicate lot numbers should also be made inactive. If an old visit is
to be edited and it has one of the old duplicate lot numbers, the old
duplicate should be replaced with the current valid lot number (easily
recognized by ignoring the leading zs).
```

Figure 13-2 Duplicate lot number warning screen

## 13.7 Protocols for Use by Other Packages

RPMS Immunization v8.3 contains three ListMan Protocols that may be of use to programmers of other packages:

- **BI PATIENT VIEW/EDIT EXT CALL:** This protocol calls up the ListMan Patient View/Edit screen. The call assumes that DFN (patient) is defined. Other optional parameters are described in routine HAVEPAT^BIPATVW. Only users who hold the BIZ EDIT PATIENTS Key have editing capability.
- **BI IMMUNIZATION ADDED:** This protocol is an Extended Action Type of Protocol (any protocols entered as ITEMS are called when this protocol is called). The Description field of this protocol lists all of the defined variables that relate to the immunization that has just been added.

- **BI IMMUNIZATION DELETED:** This protocol is an Extended Action Type of Protocol (any protocols entered as ITEMS are called when this protocol is called). The Description field of this protocol lists all defined variables that relate to the immunization that has just been deleted.

## 14.0 Appendix F: Word Processor Help

### 14.1 Summary of Key Sequences

#### 14.1.1 Navigation

Incremental movement Arrow keys

One word left and right <Ctrl-J> and <Ctrl-L>

Next tab stop to the right <Tab>

Jump left and right <PF1><Left> and <PF1><Right>

Beginning and end of line <PF1><PF1><Left>and <PF1><PF1><Right>

Screen up or down <PF1><Up> and <PF1><Down>

or: <PrevScr> and <NextScr>

or: <PageUp> and <PageDown>

Top or bottom of document <PF1>T and <PF1>B

Go to a specific location <PF1>G

#### 14.1.2 Exiting/Saving

Exit and save text <PF1>E

Quit without saving <PF1>Q

Exit, save, and switch editors <PF1>A

Save without exiting <PF1>S

### 14.1.3 Deleting

Character before cursor <Backspace>

Character at cursor <PF4> or <Remove> or <Delete>

From cursor to end of word <Ctrl-W>

From cursor to end of line <PF1><PF2>

Entire line <PF1>D

### 14.1.4 Settings/Modes

Wrap/no wrap mode toggle <PF2>

Insert/replace mode toggle <PF3>

Set/clear tab stop <PF1><Tab>

Set left margin <PF1>,

Set right margin <PF1>.

Status line toggle <PF1>?

### 14.1.5 Formatting

Join current line to next line <PF1>J

Reformat paragraph <PF1>R

### 14.1.6 Finding

Find text <PF1>F or <Find>

Find next occurrence of text <PF1>N

Find/Replace text <PF1>P



### 14.1.7 Cutting/Copying/Pasting

Select (Mark) text <PF1>M at beginning and end of text

Unselect (Unmark) text <PF1><PF1>M

Delete selected text <Delete> or <Backspace> on selected text

Cut and save to buffer <PF1>X on selected text

Copy and save to buffer <PF1>C on selected text

Paste from buffer <PF1>V

Move text to another location <PF1>X at new location

Copy text to another location <PF1>C at new location

## 14.2 Change to RPMS MailMan Full Screen Editor

Use the following steps for changing from Line Editor to Full Screen Editor in RPMS MailMan:

1. In RPMS: Select IHS Kernel Option: MailMan Menu
2. Select MailMan Menu Option: OML Other MailMan Functions
3. Select Other MailMan Functions Option: EML Edit user options
4. MESSAGE ACTION DEFAULT: ^ PREFERRED EDITOR
5. PREFERRED EDITOR: (Select: SCREEN EDITOR)
6. In Windows: Switch to Program Manager
7. Go into the Terminal Icon: Settings: Terminal Preferences:

Use Function, Arrow, and Ctrl Keys for windows should not be checked.

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## 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)

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