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Preface

The Indian Health Service (IHS) Immunization and Patient Intake and Output (I&O) components in the Resource and Patient Management (RPMS) Electronic Health Record (EHR) have been developed to meet the needs of nurses and other caregivers documenting immunizations and intake and output.
1.0 Immunizations

1.1 Introduction

The Immunizations module (Figure 1-1) enables the viewing, editing, and adding of immunization information for patients into the Resource and Patient Management System (RPMS). It requires that Version 8.0 or later of the RPMS Immunization package be installed. This component enables the provider to see immediately which vaccines the patient has received, and which ones are needed. This component has been extensively redesigned to improve user experience.

The IMM component continues with background features enabling RPMS to query the State IIS to retrieve and store IIS history and forecast data, making it available for any RPMS application. Potential settings for this capability may include:

- **2015 Certification** requires that additional information received from a state registry be included and visible. This displays when the user clicks the State Profile button, and a site has established a state IIS connection.
- Querying the State IIS for all patients with an upcoming (e.g., next day) appointment.
- Querying the State IIS for a single patient upon check-in to a clinic.
- Querying the State IIS for a single patient on demand by the nurse or provider.

By comparing the local facility’s immunization record and forecast with that from the state, users will have a more complete picture of the patient’s immunization history, discover immunizations done elsewhere that should be added to the local record, and minimize the risk of over-immunization.
If the patient may have received immunizations at locations other than yours, and your system is set up for immunization exchange with one or more states, the State Immunization Profile drop-down menu displays the State Immunization Exchanges that are configured for the site and allows for additional information to be displayed and printed for the patient.

The Immunization component may be placed anywhere in the EHR. Typically, it would be co-located with other wellness-related components, such as Patient Education and Skin Tests.

- **Forecast pane (upper left)** – Contains a list of immunizations that are Due or Past Due, as derived from the ICE Forecasting System. A user can enter a vaccine directly from this pane by double-clicking the row containing the vaccine name (refer to Section 1.3.1 for more information).
- **Immunizations From Outside Sources pane (upper right)** – Contains the Refresh States button that enables the user to display the latest information regarding outside vaccine sources (currently configured State Registries in RPMS), along with the date of the most recent query response from the state.
- **Contraindications pane** – Displays the patient’s contraindications, such as a history of chicken pox or reactions to specific vaccines.
- **Immunization History pane** – Displays all immunizations that have been received from the state or entered into the RPMS. All columns can be sorted by left-clicking a column heading. If no vaccination information for a patient is present in RPMS, the grid is empty.

The Immunization History pane also allows the user to display a visit detail by right-clicking any item in the grid. Use this to display the visit detail for a selected record (refer to Section 1.9 for more information).

**Note:** This component can be configured so that a particular user or class, for example users assigned the BGOZ VIEW ONLY KEY, cannot add/edit the immunization record.

### 1.2 Customizing the Immunization History Display

The Immunizations module allows users or sites to customize the Immunization History grid to improve usability. All changes will persist for a user but will not affect other users and can be removed later if desired without loss of data.

#### 1.2.1 Sorting

Each column can be sorted in multiple ways (Figure 1-2), as follows:

- Left-clicking sorts by age in the Age at Visit column.
- Left-clicking again reverses that sort.
• Left-clicking a third time returns the **column** to its **original order**.

Clicking the **small funnel** icon (/vnd) at the top of any column displays a check box list of all items in the column. A check box can be selected so only those data display. The **small funnel** icon changes color (/vnd) (Figure 1-2) to show that a **filter** is enabled.

![Figure 1-2: Selecting Just 13-Month-Old display](image)

### 1.2.2 Columns

When the component is installed, there are **17 columns** initially displayed in the **Immunization History**. Some users may need to see all 17, but others may determine that not all columns are needed for their use. Columns can be hidden if desired, but the data is **NOT** removed, and this will not affect any other users.

To hide a column right-click any **column header**. Be aware that left-clicking a column sorts it. Right-click displays the list of all the columns that can be hidden.

**Note:** Some columns, such as **Vaccine**, **Registry**, and **Date**, do not appear on this list and cannot be hidden.

All columns selected with check marks will display. If a user does not want to see a particular column, such as manufacturer or volume, they can clear that check box and the column will no longer display in their personal EHR. This setting will persist for future logins for that provider. Any of these check boxes can be cleared.

**Note:** To restore the original 17 columns, simply click **Restore Defaults**.
Hiding some columns may improve the display for the user, as follows (Figure 1-3):

![Immunization History display with less columns](image)

Figure 1-3: Immunization History display with less columns

1.2.3 Group By

By left-clicking any column header and dragging the column up into the Information History label area, the following message appears:

**Drag a header here and drop it to group by that column**

The user releases the left-click and the Immunization History Table is now grouped (Figure 1-4) by that column, already expanded with the data rows. This can be done for multiple columns. Clicking the X in each item will remove it from the grouping.

![Immunization History Grouped window](image)

Figure 1-4: Immunization History Grouped window
1.2.4 Rearranging Columns

Columns can be rearranged (Figure 1-5) for a particular user. A user may want to move registry information to the far right and display vaccines or dates on the left. To do this, simply grab the column by left-clicking, and drag it to the desired location. Again, this does not affect any other users’ displays.

![Figure 1-5: Columns Rearranged example](image)

1.3 Selecting a Vaccine

When selecting a vaccine, there are two options:

- Selecting Items From the Forecaster Pane (Section 1.3.1)
- Selecting a Vaccine Not in Forecast Pane (Section 1.3.2)

1.3.1 Selecting Items from the Forecaster Pane

To select from Forecaster pane, double-click the name of the vaccine and the Vaccine Search dialog (Figure 1-6) displays with the vaccine information pre-populated.

The selection list on the Vaccine Search dialog (Figure 1-6) is initially populated by default with Show only active vaccines with a Lot number. This can be changed, if desired, by selecting the Show all active vaccines or Show all vaccines option buttons (a new column to the far left in the records table displays whether the vaccine is active or inactive).
1.3.2 Selecting a Vaccine Not in Forecast Pane

To add an immunization not displayed in the Forecast Pane, do the following:

1. Click the Actions drop-down list on the far right-side of the Immunization History pane.

2. Select ADD from this list.

3. Search for the vaccine. The search value can either be the first few letters (not case sensitive) of an immunization name, or CVX code.

4. To select an entry, double-click the vaccine name, or highlight it and click OK. (Otherwise, click Cancel).

This brings the user to the Add a Vaccine field (refer to Section 1.4 for more information).

**Note:** If you select an Inactive Vaccine, it will be marked as a historical vaccination entry.
1.4 Adding an Immunization

Select an **immunization** as detailed in Section 1.3.

If you choose to add an **Immunization** for which the patient has a related contraindication, the application displays an alert (Figure 1-7) and asks if you want to continue.

![Alert: Contraindications Exist](image)

Figure 1-7: Contraindication Exist Alert dialog

The following option button topics address information about these functions:

- Section 1.4.1, Current
- Section 1.4.2, Historical
- Section 1.4.3, Not Done

1.4.1 Current

There are several fields in the **Add Vaccine** dialog (Figure 1-8).
The **Ordered By** field is defaulted with a provider assigned to the visit. The system first looks at the primary provider for the visit, and if they hold both **Provider** and **ORES** keys, defaults that user as the ordering provider. If that user does not, it will then evaluate if the logged-in user is a visit provider with both keys. If user does not, the system will assign **Ordered By** the visit provider sequenced in the **Encounter Component**, as long as those providers hold both keys.

Users can change the **Ordered By** fields by clicking the **magnifying glass** icon ( ).

The **Ordered By** search only returns values for users that hold both the **Provider** key and the **ORES** key.

The **Administered By** field defaults with the logged-in user and can be changed by clicking the **magnifying glass** icon ( ).

1. In the **Lot** field, select the **applicable lot and manufacturer** from the drop-down menu.

   **Note:** Only **Lot Numbers** designated to the facility to which the user is logged on display for selection.

2. Select the **Injection Site** from the drop-down list.
• For common vaccines, the application automatically loads default values for the **Volume and Vaccine Information Sheet**. The **VIS Presented date** defaults to the date of this visit. You can change any of these fields.

**Note:** If you select an **expired lot number**, a warning message is displayed in bold red lettering above the **Lot** field.

• The **Given** field contains the exact date and time that the immunization was administered. The default is the **current date and time**.

• If you counseled the patient/family about the immunization, select the **Patient/Family Counseled** check box. Once saved, the EHR populates the **Vaccinations** component and the **Education** component with a record.

3. **Optional.** In the **Vac. Eligibility** field, users may click to select an applicable vaccination eligibility from the drop-down menu.

4. In the **Admin Notes** field, type any applicable notes.

5. When the **Add Immunization** dialog is complete, click **OK** to add the vaccination to the **Immunization History** field. (Otherwise, click **Cancel**.)

**Note:** The **OK** button will be disabled until all required fields have been completed. There is a mouse-over tool tip letting the user know which fields must be completed.

1.4.2 Historical

**Historical immunizations** are those that were given in the past and typically would be for an outside facility or place. Adding a historic immunization causes a historic visit to be created that cannot be billed or exported.

**Note:** You can add a **historical record** by not selecting a visit and clicking the Add button on the Vaccinations group box. The Add Historical Immunization dialog displays.

To add a historical record:

1. Select the **Historical** option button on the **Add Immunization** dialog (Figure 1-9) to display the **Add Historical Immunization** dialog.
2. Manually enter the **event date** (must be historical) or click the **calendar**.

3. Populate the **Location** field.

4. If the location is an official **IHS facility**, select the **IHS/Tribal Facility** option button. You can select the location from the **Lookup Location** dialog (Figure 1-10) by clicking the **magnifying glass** icon and entering the first few letters of the location.

   ![Figure 1-10: Lookup Location dialog](image)

   - If the location is not an official **IHS facility**, select the **Other** option button. Enter the **non-official location** (for example, Dr. Name Example).

5. In the **Admin Notes** field, type any notes, as needed.
6. When the **Add Historical Immunization** dialog is complete, click **OK** to add the historic vaccination to the **Immunization History Table**. (Otherwise, click **Cancel**.)

   **Note:** The **OK** button will be disabled until all required fields have been completed. There is a mouse-over tool tip letting the user know which fields must be completed.

### 1.4.3 Not Done

1. If an immunization is not done or is refused, select the **Not Done** option button on the **Add Vaccine** dialog (Figure 1-11). Select the **date** of this event and a **reason** from the drop-down list.

   ![Add Historical Immunization dialog](image)

   **Figure 1-11: Add Historical Immunization dialog**

2. Click **OK** when the dialog is complete. This adds an **Immunization Refusal Record** to the **Immunization History** field, as well as adding a **Refusal** to the **Personal Health** component. (Otherwise, click **Cancel**.)

   **Note:** The **OK** button will be disabled until all required fields have been completed. There is a mouse-over tool tip letting the user know which fields must be completed.
1.5 Editing a Vaccination

Make sure a visit is selected. Follow these steps to edit a vaccination:

1. Highlight a vaccination record on the Immunization History grid that you want to edit.

   **Note:** Vaccinations can only be edited until the visit is locked.

2. Select Edit from the Actions drop-down list at the top right of the Immunization History Table or highlight and right-click the immunization to edit. The Edit Immunization dialog (Figure 1-12) displays. If the visit is locked, the Edit option will be grayed out and cannot be selected. The existing information about the selected record displays.

   ![Figure 1-12: Edit Immunization dialog](image)

   **Note:** You can edit the Dose Override field only if you have been assigned the BIZ EDIT PATIENTS security key.

   The Dose Override field affects the forecasting. It ignores invalid doses and counts forced, valid doses. The field is used to force a dose as valid (if given a day or so early but will not affect school) or invalid (due to expired vaccine, and so on).

3. Enter a reaction by selecting from the drop-down list (Figure 1-13) for the Reaction field.
If one of the following is selected, then a corresponding contraindication is automatically added:

- Anaphylaxis
- Convulsions
- Lethargy
- Fever >104

Otherwise, you are asked if it should be added as a contraindication for the patient (Figure 1-14). If you answer yes, a contraindication of Other Allergy is added.

4. Click Yes to save the reaction as a contraindication. (Otherwise, click No.)

5. When the Edit Immunization dialog is complete, click OK to change the information about the selected record. (Otherwise, click Cancel.)

1.6 Deleting a Vaccination

Follow these steps to delete a vaccination:

1. Highlight a vaccination record in the Immunization History that you want to delete.
Immunizations can only be deleted by the individual who entered them. Otherwise, the following message (Figure 1-15) displays:

![Cannot Delete Vaccination](image)

Figure 1-15: Cannot Delete Vaccination warning message

**Note:** Vaccinations can only be deleted on an unlocked visit.

2. Right-click and select **Delete Immunization** or select **Delete** from the drop-down **Actions** menu at the far right of the **Immunization History** field. This displays the **Remove Immunization?** warning message (Figure 1-16).

![Remove Immunization](image)

Figure 1-16: Remove Immunization information message

3. Click **Yes** to remove the immunization from the **Immunization History** grid. (Otherwise, click **No**.)

### 1.7 Action Items

This section provides information about the selections on the **Actions** drop-down menu (Figure 1-17) located at the far right of the **Immunization History** field.
Important: The Case Data option only displays in the Action drop-down list if the user holds the appropriate BIZ Manager key.

For Add, Edit, and Delete, refer to the following topics:

- Section 1.4 - Adding an Immunization
- Section 1.5 - Editing a Vaccination
- Section 1.6 - Deleting a Vaccination

Note: For Actions list selections with pop-up windows, you can change the font size of the text displayed in this pop-up by adjusting the size in the Font Size field (enter manually or use the Up and Down arrows). This does not change the size of the text on the output (when you print).

1.7.1 Print Record

1. Select Print Record from the Action list (or by right-clicking anywhere in the Immunization History Table) to display/print the Official Immunization Record (Figure 1-18) information for the current patient.
2. Click **Print** to choose a **printer** and to output the (entire) contents of this pop-up to the specified printer.

Users are able to **highlight** and **copy** selected text, and then paste it into any **free-text field** within the EHR or into another application (like MS Word).

**Note:** The **Print** button may not appear. It depends on how your application is configured.

3. Click **Close** to dismiss the pop-up.
1.7.2 Due Letter

Select Due Letter from the Action list, or by right-clicking anywhere in the Immunization History Table, to display/print the Immunizations Due Letter (Figure 1-19) information for the current patient.

The Due Letter (Figure 1-19) selection requires that a letter template has been selected (in RPMS).

![Due Letter example](image)

Figure 1-19: Due Letter example
1.7.3 Profile

1. Select **Profile** from the **Action** drop-down list (or on the right-click menu) in the **Immunization History Table** to display/print the **Immunization Profile** dialog (Figure 1-20). This provides information about the patient’s immunization profile.

   **Note:** This selection requires that the **Forecaster** is installed, and the **immunization site parameters** must be configured to point to the **Forecaster**.

![Immunization Profile](image)

Figure 1-20: Immunization Profile Information

2. Click **Print** to choose a printer and to output the (entire) contents of this pop-up to the specified printer. The pop-up has a right-click menu where you can copy selected text and paste it into any free-text field within the EHR or into another application (like MS Word).

   **Note:** The **Print** button may not appear. It depends on how your application is configured.
3. Click **Close** to dismiss the pop-up.

1.7.4 **Case Data**

Select **Case Data** from the **Actions** drop-down list or from the right-click menu in the **Immunization History** field to view/edit the **Immunization Register** data for the patient. The **Edit Patient Case Data** dialog (Figure 1-21) displays.

![Figure 1-21: Edit Patient Case Data](image)

**1.7.4.1 Active/Inactive (Option Buttons)**

This indicates the status of the patient in the **Immunization Register**. Since the **Immunization Register** is a very actively managed register and reports only those patients that have an **ACTIVE status**, the panel is used to case manage the **Immunization Register**.

All children from birth to 36 months that live in **Government Performance and Results Act of 1993 (GPRA)** communities are automatically **ACTIVE**. On review of children, some are changed to **INACTIVE** if they fit the **MOGE (Moved or Going Elsewhere)** criteria.

When you choose to change to **INACTIVE status**, you must justify or explain why. In the **Moved To/Elsewhere** field, indicate where the patient went, such as **El Rio Clinic** for example. The **Inactive Date** (Figure 1-22) is very important because the child is included in all reports up to that inactive date. Since children and their parents do not report that they have moved away (they just stop coming to the clinic), this function gives those producing **GPRA** reports a way to have a more accurate denominator when tracking.
If a name is included in the **Parent/Guardian** field, that information is included in the reminder letters.

The **Other Info** field is where the **Case Manager** can enter anything that might be valuable.

1. Populate the **remaining field** by selecting from the drop-down lists.
2. Click **OK** to update the **Immunization Register** with the entered data. (Otherwise, click **Cancel**.)

### 1.8 Contraindications Group Box

If the patient has had a contraindication or refusal to an immunization, it can be recorded with the corresponding reason being specified. Any contraindications entered for the patient are displayed in the **Immunization** component, and you are alerted if the associated vaccine is subsequently selected.

#### 1.8.1 Adding a Contraindication

Make sure a visit is selected. To add **patient contraindications**, follow these steps:

1. Click **Add** on the **Contraindications** group box (or select **Add Contraindication** on the right-click menu) to display the **Enter Patient Contraindication** dialog (Figure 1-23).
2. Click the **magnifying glass** icon at the end of the **Vaccine** field to display the **Vaccine Selection** dialog. Here you select a vaccine (refer to Section 1.3 for more information). The selected vaccine displays in the **Vaccine** field of the **Enter Patient Contraindication** dialog.

3. Click **Yes** to continue on the **Enter Patient Contraindication** dialog. (Otherwise, click **No**.)

4. Select the **Contraindication Reason**.

5. When the **Enter Patient Contraindication** dialog is complete, click **Add** to add the contraindication to the **Contraindication** panel. (Otherwise, click **Cancel**.)

The contraindication displays in the **Contraindications group box** and in the patient's **Official Immunization Record**.

1.9 Displaying Visit Detail

The **Immunization** component has the **Display Visit Detail** option on the right-click menu.

1. Select any **immunization record** on the **Immunization History Table** and select **Visit Detail**. The **Visit Detail** dialog (Figure 1-24) displays.
2. Click **Print** to choose a printer and to output the (entire) contents of the **Visit Detail** to the specified printer. Be aware that the **Print** button may not be there. It is according to how your application is configured.

   **Note:** You can change the font size of the text displayed in the **Visit Detail** dialog by adjusting the size in the **Font Size** field (enter manually or use the Up and Down arrows). This does not change the size of the text on the output (when you print).

3. The **Visit Detail** has a right-click menu where you can copy selected text and paste it into any free-text field within the EHR or into another application (like MS Word).

4. Click **Close** to dismiss the **Visit Detail** dialog.

### 1.10 Web Reference

If the user selects and highlights any entry in the **Immunization History Table** (Figure 1-25) and clicks the **Information** button ( ) found at the very top of the **Immunization Record** (above the **Forecast** pane) or selects the **Web Reference** option by right-clicking the item, this will take the user to a website for the topic associated with the selected record. The **Search Term** field will be pre-populated with the selected vaccine.
If there are no immunization records present or if no record is selected, clicking the **Information** button () or selecting the **Web Reference** option on the right-click menu displays the **Web Reference Search** dialog (Figure 1-26).

Select a **Reference Site**, if needed. The default is the **DynaMed** website. After entering a **search term** and clicking **Search**, the selected website for the specified term appears.

You can change to another website by selecting from the **Reference Site** drop-down list.
2.0 Patient Intake & Output

2.1 Introduction

The Patient I&O component permits users to enter and view a patient’s Intake & Output data. Data can be graphed over time. This is a new component and is designed to replace paper Intake & Output sheets.

**Important:** This component is for documenting I&O on inpatients ONLY.

Read all the documentation for EHR v1.1, Patch 35, and associated patches. Documentation can be found at:

- RPMS Clinical Applications website:
  [https://www.ihs.gov/rpms/applications/clinical/](https://www.ihs.gov/rpms/applications/clinical/)
- RPMS Trainings/Recordings:
  [https://ihs.cosocloud.com/rpms-tr/event/event_info.html](https://ihs.cosocloud.com/rpms-tr/event/event_info.html)

**Note:** If directed to enter a Username and Password, click OK to proceed to the Training Repository page.

- RPMS Training Course Materials:
  [https://www.ihs.gov/rpms/training/course-materials/](https://www.ihs.gov/rpms/training/course-materials/)
- RPMS EHR online help can be located within the RPMS EHR.

2.2 Intake & Output Component

Before the Patient Intake & Output component can be used, the site CAC must add a new component, Patient Intake & Output, to a tab in the EHR. This component is distributed as part of EHR 1.1 p35.

**Note:** If a site has multiple EHR templates in use, this must be added to each one separately. In the screen shot below, this tab is labeled IO, but sites can choose their own label.

The I&O component (Figure 2-1) is currently designed for use only on inpatients. It is divided into four areas:

- Data Entry Area
- Most Recent Data
- Review Area
- Graphing Area
2.2.1 Viewing the Data on the Component

When an inpatient is selected, the most recent data is displayed in Area 2 of the I&O component, which is located in the lower-left corner of the window. Items can be selected to appear in the other sections (Figure 2-2), or the user can enter a new Intake & Output.

2.2.1.1 Most Recent I&O

The most recent data displays the I&O for the last 8-, 12-, or 24-hours (Figure 2-3). The default is 24-hours, but can be changed in the component. It totals up the three main areas, Intake, IV intake, and Output. The fluid balance is also displayed.
2.2.1.2 I&O History

The I&O History area (Figure 2-4) allows the user to determine how far back I&O should be displayed. The standard choices are:

- Today
- One week
- Admission
- Date Range

If Date Range is selected, the user can determine the Start and End dates on the Select Retrieval Date Range (Figure 2-5) dialog.
The history appears from earliest date to the most recent (Figure 2-6), similar to the way the display works in the **Vitals** component.

![Graphing I&O](image)

2.2.1.3 **Graphing I&O**

By clicking any **element** in the **History list**, a graph appears with the following selected items (only one item displays at a time):

- Oral Intake
- IV Intake
- Output

The graph can have **values added** or a **grid** added by selecting the check box on the left (Figure 2-7).
2.2.1.4 Data Point Detail

If the user right-clicks any data point, the details of all the data entered on that date are displayed (Figure 2-8). This is also similar to the Vitals component.

2.2.2 Entering Data on the Component

The top-left area (Figure 2-9) of the I&O component is for entering Intake & Output data. A user must first click anywhere in the field labeled Click to Enter I/O.
2.2.2.1 Selecting the Date

The user first selects the **Date/Time** for the entry in the **Enter Patient Input/Output Values** dialog (Figure 2-10). A date is selected from the left and the time in hours and minutes from the right. If minutes are not selected, the system uses the current minutes when the data is entered.
2.2.2.2 Selecting the Type

The user must select the type:

- Intake
- IV Intake
- Output

Once a type is selected, the subtypes that can be used display (Figure 2-11). The user can select any or all of the subtypes. Units are always in milliliters.

**Intake** displays first as the default, but this can be changed by a CAC in RPMS. Go to General Parameters (XX), EP (Edit parameters), select BEHOGMY as the parameter, and then select DEFAULT ENTER TYPE. You may make a new default for the entire system or for a single user. Display possible options with a single question mark and choose another type if desired (IV INTAKE or OUTPUT).

![Figure 2-11: Intake Type dialog](image)

If a user enters a value that exceeds the maximum value limit (set at 5000 ml as a default), they receive a warning (Figure 2-12). This same warning limit appears for entries for intake, IV intake, and output.
Figure 2-12: Input Exceeds Warning Threshold of 5000 warning message

This message warns a provider of an unusually high value and allows them to change this if it has been entered in error or accept it if correct. Some providers (for example, neonatologists) may want a much lower warning value. This can be changed by a CAC in RPMS, as follows:

1. Go to General Parameters (XX) > EP (Edit parameters).
2. Select BEHOGMY as the parameter.
3. Then select WARN AT LEVEL.
4. Determine if this change will be for the system or for an individual, and then enter the new value (Figure 2-13).

Figure 2-13: Setting a New BEHOGMY Warning Level

After all the subtypes are selected, the data MUST be saved before the user can move on to another type (for example, move from Intake, to IV Intake, or Output). If the user does NOT save the data before continuing, the following warning message (Figure 2-14) appears.

Figure 2-14: Unsaved Data Alert warning message

Click No to save the data. Once the data is saved, it updates the totals seen in the lower-left panel. (Otherwise click Yes).
2.2.2.2.1  **Intake**

There are four types of **Intake** (Figure 2-11) available:

- Irrigation
- Oral
- Tube Feeding
- Other

2.2.2.2  **IV Intake**

There are six types of **IV Intake** (Figure 2-15) available:

**Note:** Due to limitations of this release and software from the VA, intravenous fluids concentrations are listed in **Admixtures**.

- **Admixture** – An admixture preparation is defined if one of the following criteria is met:
  - Intravenous Solutions. IV fluids are administered to restore fluid to the intravascular compartment used to facilitate the movement of fluid to maintain cellular osmosis. The three main types of IV fluid are:
    - Isotonic
    - Hypotonic
    - Hypertonic
    Examples: 0.9% Normal Saline, Lactated Ringers, Dextrose 5%, 0.45% Normal Saline.
  - Preparation using an injection powder. Example: Reconstituting a Ceftriaxone vial with normal saline.
  - Preparation with 3 or more medication vials. Example: Preparation of a Banana Bag.
  - Syringe preparation used to dilute liquids or infusion liquids. Example: Adding Promethazine to a normal saline infusion.
  - Preparation of individual dosages requiring complex calculations. Example: Acetylcysteine intravenous administration protocol.
- **Blood Products** – A therapeutic substance that is derived from human blood that includes whole blood and other blood components for transfusion, such as packed red blood cells (PRBCs), fresh frozen plasma (FFP), cryoprecipitate, immune globulins, platelets, etc.
- **Heparin/Saline Lock** – A Heparin lock has a concentrated heparin solution and is injected to prevent clotting within central lines. A saline lock is injected with a saline flush to prevent clotting in intravenous cannulas when not in use.
• **Hyperal** – Also known as Parenteral Nutrition, is a form of nutrition that is delivered into a vein. Hyperalimentation does not use the digestive system. It may be given to people who are unable to absorb nutrients through the intestinal tract because of vomiting that will not stop, severe diarrhea, or intestinal disease.

• **Intralipids** – Refers to an emulsion of fat for Parenteral Nutrition that provides carbohydrates, vitamins, minerals, electrolytes, and fat. Most commonly used for patients with a Percutaneous Endoscopic Gastrostomy (PEG) feeding tube or critically ill patients with the need for supplement feeding.

• **Piggyback** – An Intravenous Piggyback (IVPB) can also be referred to as a secondary IV therapy. It is a small bag of solution that is attached to a primary infusion line.

![Figure 2-15: IV Intake Types dialog](image-url)
An individual or site may reduce the number of **IV Intakes** from the six default entries (Figure 2-16), for example if they never offer **Intralipids** or **Hyperalimentation**. Once again, a CAC does this in RPMS, XX, EP, BEHOGMY and selects **EXCLUDE IV TYPE**. The default is to not exclude any types, so they all display. The CAC can select items to prevent their display, as below:

![Figure 2-16: Reduce the Number of IV Intakes](image)

2.2.2.2.3 **Output**
There are seven types of **Output** (Figure 2-17) available:
- Blood
- Drainage
- Emesis
- Feces
- N/G
- Urine
- Other
Once all values have been stored, they are available in the History area (Figure 2-18).

![Figure 2-18: I&O Component with new data](image)

### 2.2.2.3 Editing or Marking an Entry in Error

**Note:** To edit an entry originally created by another person, you must hold the **BEHOZGMY EDIT** security key.

If a value is entered in error, it can be edited or deleted.

**Note:** No values are actually deleted. They are marked **Entered in Error (EIE)** just as Vitals, Problems, and Allergies are in the EHR.

Right-click the item to be corrected in the **upper-right field** (Figure 2-19), and then it can be marked **EIE** or it can be edited.

**Note:** This can only be done with one item at a time.
Note: If edits need to be made to existing entries after the patient is discharged or missing entries need to be added, contact your Clinical Coordinator or open a support ticket. Refer to Appendix A: Enter/Edit Patient I & O for additional information.

2.2.2.3.1 Editing an Entry
Users can change the time and the value for an entry (Figure 2-20). The type cannot be edited. Changes must be saved before they are stored.

2.2.2.3.2 Entered in Error
If the item is marked as EIE, a warning message (Figure 2-21) displays asking the user to confirm the action before it occurs. Once confirmed, the value will not be displayed or included in the totals for the period being viewed.

2.3 I&O Reports Setup
This section describes the I&O reports available.
2.3.1  Setting Up the OE/RR Report in RPMS

The OE/RR report is called the BEHO I&O SUMMARY. It must be added to the parameter that holds OE/RR reports before it is visible in the EHR.

2.3.1.1  Adding the Report

1. To add the report to the appropriate parameter, navigate to the General Parameter Tools menu (XX) (Figure 2-22), select EP....Edit Parameter Values.

   Figure 2-22: General Parameter Tools Menu

2. At Select PARAMETER DEFINITION NAME: (Figure 2-23), select ORWRP REPORT LIST....List of reports.

   Figure 2-23: Select Parameter Definition Name

3. At the ORWRP REPORT LIST (Figure 2-24), select 4...System....SYS...[DEMO.MEDSPHERE.COM] to set the parameter (this differs on each site’s system).
ORWRP REPORT LIST may be set for the following:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>User</td>
<td>USR</td>
<td>[choose from NEW PERSON]</td>
</tr>
<tr>
<td>3</td>
<td>Division</td>
<td>DIV</td>
<td>[choose from INSTITUTION]</td>
</tr>
<tr>
<td>4</td>
<td>System</td>
<td>SYS</td>
<td>[DEMO.MEDSPHERE.COM]</td>
</tr>
<tr>
<td>6</td>
<td>Package</td>
<td>PKG</td>
<td>[ORDER ENTRY/RESULTS REPORTING]</td>
</tr>
</tbody>
</table>

Enter selection: 4 System DEMO.MEDSPHERE.COM ← Select System

Figure 2-24: Setting ORWRP Report List

4. Add a **new sequence number** and enter the new report name, **BEHO I&O SUMMARY** (Figure 2-25).

| Sequence: 110// | 110 |
| Report: BEHO I&O SUMMARY// |

Figure 2-25: New Sequence Number and Report

### 2.3.1.2 Viewing the Report

From the **EHR Reports** menu, users can view many different time frames (Figure 2-26). All of the **I&O** for the selected time frame will display in the format shown below. This shows a 12-hour period on January 30 with entries at **01:15**, **09:15**, and **11:58** along with the summary of **intake**, **IV intake**, **Output**, and **Fluid Balance** for this period of time. This can be copied and pasted into an EHR note if desired.
2.3.2 Health Summary Report

The **Health Summary Report** component for I&O is included in the **Health Summary Components (BHS), 1.0 patch 16**. Users can add it to the **Ad Hoc health summary** or make their own health summary with this component in it. This must be done by the **Clinical Applications Coordinator (CAC)** at the site.

2.3.2.1 Adding I&O to the Ad Hoc Health Summary

1. Go to the **GMTS MANAGER** menu (found within **VAHS Menu**).

2. On the **GMTS Manager Menu** within RPMS (Figure 2-27), select **number 4**, (found within the **VAHS Menu**) **Health Summary Maintenance Menu**.
3. On the **Health Summary Maintenance Menu** (Figure 2-28), select number 3, **Edit Ad Hoc Health Summary Type**.

4. Enter **IO**.

The next entry allows users to select this **component** (Figure 2-30).
If the component is already entered, the following message (Figure 2-31) displays:

![Image of warning message]

Figure 2-31: I&O warning message

If this has not been previously entered, users must enter the Summary (Sequence) Order number, Occurrence Limit, Time Limit, and Header Name to add it to the Ad Hoc Health Summary. (Figure 2-32).

![Image of ad hoc summary]

Figure 2-32: Ad Hoc Summary

### 2.3.2.2 Viewing the Health Summary

Once the component has been added to the Ad Hoc Health Summary, (Figure 2-33), it should be selectable from the Health Summary Reports Menu in the EHR. (This may display as AdHoc or as GMTS AdHoc, depending on installation). The default on this component is 30 occurrences or 7 days. However, users can change this at will. Users cannot change the Start Date and Time or Finish Date and Time for this health summary.
Figure 2-33: Ad Hoc Health Summary dialog

The report will print and look very similar to the OE/RR report (Figure 2-34).
2.3.3 TIU Objects

Three TIU Objects have been included in TIU 1.0 patch 1025 for Intake & Output:

- I&O-8HRS
- I&O-12HRS
- I&O-24HRS

All of these objects use the same logic and only differ in the time frame that they use to look up the data. Each object displays the entry with its time. In the example below (Figure 2-35), the first set of entries was at **11:58:19**, and a second set was entered at **17:15**, both on **January 30**. The times are noted just above each data entry.
Objects can be added to a template by a site CAC so users can insert it into their note.

**Note:** The header in Figure 2-35, **8-hour object**, is **NOT** included in the object itself and must be added by the CAC when making the template.

These objects pull data from the moment they are added to the note, and look back **8-**, **12-**, or **24-hours** from that time. If a different **Start** or **End Time** is needed (for example, for a late entry), users must use the **IO Report** from the **Reports** menu and insert this into their documentation.
3.0 PPN Parameter

This application uses the AUPN DISPLAY PPN parameter functionality and is defaulted to OFF until Patient Preferred Name (PPN) is available across the enterprise.

While this parameter is turned off, the PPN will NOT display in this application except as a result of the patient lookup function. This allows the PPN display to be turned on at once without requiring a coordinated release of all applications.

Once all applications support the display of the PPN, instructions will be provided on how to enable this parameter system-wide.

Figure 3-1 is an example of a Patient Selection (Search) dialog with the PPN displayed to the right under the HRN number:

![Figure 3-1: Patient Selection (Search) dialog with the PPN displayed](image-url)
Figure 3-2 is an example of a PPN in an EHR Banner:
Appendix A  Enter/Edit Patient I & O

The Enter/Edit Patient Output option is accessed through the Patient Intake/Output Menu option.

A.1  Editing Existing Entries in Patient I & O

**IMPORTANT:** Before proceeding with any EDIT updates for existing Inpatient I&O entries, it is STRONGLY recommended that a Service Now (SNow) – via itsupport@ihs.gov – Helpdesk ticket for RPMS EHR Support (Tier 3B) be submitted. Do not proceed without RPMS EHR Support – Tier 3B.

A.2  Entering New Patient I&O

This is only to be utilized to enter NEW Patient I & O entries after patient discharge.

A.3  GMRY Edit Intake

A.4  Enter New Patient Intake Description

This option allows the user to enter new patient intake records (for example, oral, IV, and nasogastric). Data is stored in the GMRY Patient I/O (#126) file. Refer to Chapter 2, Maintenance of Site Files for editing associated files.

A.5  Additional Information

Enter New Patient Intake is the primary option used to enter patient intake. Users will note that two (2) columns display after the patient's hospital location or patient's name is entered.

Table A-1: Detailed input from 6 to 9

<table>
<thead>
<tr>
<th>Detailed Input From 6 to 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
</tbody>
</table>
Detailed Input From 6 to 9

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Tube Feeding</td>
</tr>
<tr>
<td>8</td>
<td>Irrigation</td>
</tr>
<tr>
<td>9</td>
<td>Other</td>
</tr>
</tbody>
</table>

**Important:** Only utilize **Options 1 thru 5** above to enter, edit, or delete.

- The column on the left permits a user to document only the total intake (in milliliters) associated with a specific intake type (PO, IV, etc.).
- The column on the right allows users to document the names of specific liquids, fluids, solutions, etc., associated with an intake type.

The **Enter New Patient Intake** option prompts the user once the **Intake** is entered, to enter the patient's **Output**. This was done to simplify the **I&O** process and save time. The prompt's response is defaulted to **YES**, but users can answer **N** (for NO) if there is no output at this time.

### A.6 Restrictions

Data can only be edited for the previous 48-hour period. Future data cannot be entered.

### A.7 Menu Display

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enter/Edit Patient Intake</td>
</tr>
<tr>
<td>2</td>
<td>Enter/Edit Patient Output</td>
</tr>
<tr>
<td>3</td>
<td>Start/Add/DC IV and Maintenance</td>
</tr>
<tr>
<td>4</td>
<td>Print I/O Summary by Patient (by Shift &amp; Day(s))</td>
</tr>
<tr>
<td>5</td>
<td>Print I/O Summary (Midnight to Present)</td>
</tr>
<tr>
<td>6</td>
<td>Print I/O Summary (48 Hrs)</td>
</tr>
<tr>
<td>7</td>
<td>24 Hours Itemized Shift Report</td>
</tr>
<tr>
<td>8</td>
<td>Intravenous Infusion Flow Sheet</td>
</tr>
<tr>
<td>9</td>
<td>Configure I/O Files (ADP Coordinator Only) ...</td>
</tr>
</tbody>
</table>

Figure A-1: Menu Option Display

### A.8 Screen Prints

1. Select **Patient Intake/Output Menu Option: 1 Enter/Edit Patient Intake**.
2. Select **P** from (A)ll patients on a unit, (S)elected Rooms on a unit, or (P)atient?.
3. Select **PATIENT NAME: IOPATIENT, ONE 01-19-25 000632111 NSC VETERAN**.
4. Enter patient name.
5. Select **HOSPITAL LOCATION**:.

If the patient is an outpatient, the hospital location prompt displays.

The following example demonstrates the use of the **left column** for documenting ingested items. More than one (1) entry can be entered by separating numbers by a comma (,) or a hyphen (-) for a range of numbers.

| 1 | PO       | 6 | PO       |
| 2 | IV ACCESS| 7 | TUBE FEEDING |
| 3 | TUBE FEEDING | 8 | IRRIGATION |
| 4 | IRRIGATION | 9 | OTHER |
| 5 | OTHER |

Select from 1 to 9 (enter 1,3-5 etc.) or "^" to quit: 1
Enter intake: PO

No records in the database within the last 48 hours

**Figure A-2: Use of left column for documenting ingested items**

**Important:** Only utilize **Options 1 thru 5** above to enter, edit, or delete.

**Note:** The system alerts the user when no information for this intake type has been recorded in the previous 48 hours. If entries are present the program displays data entered within the last 48 hours and a prompt that allows the user to edit, delete, and add a new entry (for example, Select a Number – 1 to edit; 1@ to delete, or N to add, ^ to quit selection 6).

Please enter a new DATE/TIME: T@0902  (DEC 28,1992@09:02:00)

**Figure A-3: Enter date/time dialog**

6. Enter appropriate **date/time**.

Enter PO dated DEC 28,1992@09:02 Unit ml is not required.

TOTAL AMOUNT: 560

**Figure A-4: Enter date/time**

7. Enter the **intake volume**. **Ml** does not have to be entered after the volume.

Total PO intake for this time: 560 mls
Do you want to enter OUTPUT? Yes// <RET>  (Yes)

**Figure A-5: Intake volume dialog**

8. Enter **N** to exit if there is no output for this patient.
2 N/G
3 EMESIS
4 DRAINAGE
5 FECES
6 OTHER
Select from 1 to 6 (enter 1,3-5 etc.) or "^" to quit: URINE//<RET>

Figure A-6: Enter N to exit

**Note:** The above screen display can be changed/edited through the Output Type option (refer to Enter New Patient Intake Description).

Enter output: URINE

Figure A-7: Enter output: Urine

Urine is the default, but the user may enter another output type from the above list.

No records in the database within the last 48 hours

Figure A-8: No records in the database within the last 48 hours dialog

**Note:** The system alerts the user when no information for this output type has been documented in the previous 48 hours. If entries are present, the program displays those entered within the last 48 hours.

Please enter a new DATE/TIME: N (DEC 28,1996@09:05:04)

Figure A-9: Enter date/time dialog

9. Enter the appropriate **date/time**.

Enter URINE dated DEC 28,1996@09:05 Unit ml is not required
1. VOIDED 3. SUPRAPUBIC CATHETER
2. FOLEY CATHETER

Figure A-10: Enter date/time

**Note:** The above screen display of urine subtypes can be adjusted by editing the Output Subtype file through the Configure I/O Files (ADP Coordinator Only) option.

10. Users may document how the output was obtained by entering a urine output subtype (for example, **voided**, **foley catheter**, or **suprapubic catheter**).

If the user does not want to enter a subtype, enter <RET>.
11. The user is then asked to enter an **amount** that is a **numeric entry**. The user does not have to enter **cc/ml**.

If the actual amount cannot be determined, an estimated amount using $S =$ Small, $M =$ Medium, and $L =$ Large may also be entered.

Select a number for the URINE SUBTYPE(optional): 2
FOLEY CATHETER

Figure A-11: Enter amount numeric entry dialog

12. Enter appropriate **subtype**.

Enter numeric value for measured output in cc/ml or enter $S(mall)$, $M(edium)$ or $L(arge)$ for estimated output.
OUTPUT AMOUNT: 340

Figure A-12: Enter appropriate subtype

### A.9 IV Access

Under this option, the user is able to enter the amount of the IV solution left in the container at the end of the shift or at any time an IV intake total must be entered. The Start/Add/DC IV and Maintenance option does not automatically calculate an accurate amount of absorbed solution per shift.

Select Patient Intake/Output Menu Option: 1 Enter/Edit Patient Intake by (A)ll patients on a unit, (S)elected Rooms on unit, or (P)atient? P

Select PATIENT NAME: IOPATIENT,ONE 01-19-25 000632111 NSC VETERAN
Detailed input from 6 to 9
1  PO
2  IV ACCESS
3  TUBE FEEDING
4  IRRIGATION
5  OTHER
Select from 1 to 9 (enter 1,3-5 etc.) or "^^" to quit: 2
Enter intake: IV ACCESS
1. D5W 1000 mls 1000 mls (A) LEFT HAND Started on FEB 11,1996@10:39

Figure A-13: The software displays a list of the patient’s IVs that were entered through the Start/Add/DC IV and Maintenance option.

**Important:** Only utilize Options 1 thru 5 above to enter, edit, or delete.

Enter the number of the IV you wish to enter/edit INTAKE: 1
Enter IV INTAKE for D5W 1000 mls A LEFT HAND 1000 mls Started @FEB 11,1996@10:39
Total amount absorbed: 0 mls

Figure A-14: The software indicates the total IV intake previously documented through the option and associated with this IV.

No intake records for this IV line within the last 48 hours

Figure A-15: If no IV intake was entered, the display appears on the screen.

Please enter a new DATE/TIME: @1500 (FEB 11, 1996@15:00:00) Enter ADMIXTURE intake dated FEB 11, 1996@15:00
Enter * for AMOUNT LEFT if amount of solution absorbed is unknown.
Unit mls is not required.
AMOUNT LEFT: 600

Figure A-16: This is the amount of the IV solution left at 1500 hours or 3:00 p.m.

Intake for this period: 400 mls ? Yes//<RET> (Yes)

Figure A-17: This is the amount of the IV fluid absorbed from the 1000 ml bag from the time it was started at 10:39 a.m. this morning.

Do you want to enter OUTPUT? Yes// N (No)

Figure A-18: Do you want to enter OUTPUT?

A.10 GMRY Edit OUTPUT

A.10.1 Enter/Edit Patient Output Description
This option allows users to enter or edit patient output records only. Patient data is stored in the GMRY Patient I/O (#126) file.

A.11 Restrictions
Data can only be edited for the previous 48-hour period. Future data cannot be entered.

A.11.1 Menu Display

<table>
<thead>
<tr>
<th>Select OPTION NAME</th>
<th>GMRYMGR Patient Intake/Output Menu</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Enter/Edit Patient Intake</td>
</tr>
<tr>
<td>2</td>
<td>Enter/Edit Patient Output</td>
</tr>
<tr>
<td>3</td>
<td>Start/Add/DC IV and Maintenance</td>
</tr>
<tr>
<td>4</td>
<td>Print I/O Summary by Patient (by Shift &amp; Day(s))</td>
</tr>
<tr>
<td>5</td>
<td>Print I/O Summary (Midnight to Present)</td>
</tr>
<tr>
<td>6</td>
<td>Print I/O Summary (48 Hrs)</td>
</tr>
<tr>
<td>7</td>
<td>24 Hours Itemized Shift Report</td>
</tr>
<tr>
<td>8</td>
<td>Intravenous Infusion Flow Sheet</td>
</tr>
</tbody>
</table>
A.11.2 Screen Prints

If the patient is an outpatient and/or placed on a ward for 23-hour observation, the hospital location prompt displays.

```
Select HOSPITAL LOCATION: 1 EAST
1 URINE
2 N/G
3 EMESIS
4 DRAINAGE
5 FECES
6 OTHER
Select from 1 to 6 (enter 1,3-5 etc.) or "^" to quit: URINE//<RET> Enter output: URINE
1. FEB 2,1996@08:00 245 mls VOIDED
3. FEB 1,1996@14:24 455 mls FOLEY CATHETER
4. FEB 1,1996@09:49 100 mls SUPRAPUBIC CATHETER
Select a number(i.e., 1 to edit; 1@ to delete or N to add; ^ to quit selection): N
Please enter a new DATE/TIME: @0845 (FEB 02, 1996@08:45:00)
```

Figure A-21: Hospital Location prompt

1. Enter date/time of output.

```
Enter URINE dated FEB 2,1996@08:45 Unit ml is not required
1. VOIDED 3. SUPRAPUBIC CATHETER
2. FOLEY CATHETER
Select a number for the URINE SUBTYPE(optional): 1
Enter numeric value for measured output in cc/ml or enter S(mall), M(edium)
or L(arge) for estimated output.
OUTPUT AMOUNT: S// 240
```

Figure A-22: Date/time of output

A.11.3 Deleting Errors

The entry number, followed by an @ deletes the entry as shown below.

```
Select Patient Intake/Output Menu Option: 2 Enter/Edit Patient Output by
(A)ll patients on a unit, (S)elected Rooms on unit, or (P)atient? P
Select PATIENT NAME: IOPATIENT,TWO 04-25-38 000222111
```

Figure A-23: Deleting errors
If the patient is an outpatient, the **Hospital Location** prompt displays.

![Hospital Location prompt]

Select HOSPITAL LOCATION: 1 EAST
1 URINE
2 N/G
3 EMESIS
4 DRAINAGE
5 FECES
6 OTHER
Select from 1 to 6 (enter 1,3-5 etc.) or "^" to quit: URINE/<RET>

Figure A-24: Hospital Location prompt

Urine is the software's default response.

![Enter output: URINE]

Enter output: URINE
1. FEB 2,1996@08:45 240 mls VOIDED
2. FEB 2,1996@08:00 245 mls VOIDED
3. FEB 1,1996@14:24 455 mls FOLEY CATHETER
4. FEB 1,1996@09:49 100 mls SUPRAPUBIC CATHETER
Select a number (i.e., 1 to edit; 1@ to delete or N to add; ^ to quit selection): 2@

Figure A-25: Enter output: URINE

Select the **entry** to be deleted.

![Select entry to be deleted]

Are you sure you want to delete this record? Yes/<RET> (Yes) URINE
Entered on FEB 2,1996@08:00 has been deleted!!!

Figure A-26: Select entry to be deleted

The user can reenter the **date/time** and enter the **correct amount** if appropriate.
Appendix B 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 will be 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 with IHS policy.

- For a listing of general ROB 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 website: https://home.ihs.gov/security/index.cfm

Note: Users must be logged on to the IHS D1 Intranet to access these documents.

The ROB listed in the following sections are specific to RPMS.

B.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., Dental, Pharmacy).

B.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 nonpublic 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 their 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 jobs or by divulging information to anyone not authorized to know that information.

B.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 functions they perform, such as system administrator or application administrator.
- Acquire a written preauthorization in accordance with IHS policies and procedures prior to interconnection to or transferring data from RPMS.

B.1.3 Accountability

RPMS users shall:

- Behave in an ethical, technically proficient, informed, and trustworthy manner.
- Log out of the system whenever they leave the vicinity of their personal computers (PCs).
- 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.
• Abide by all Department and Agency policies and procedures and guidelines related to ethics, conduct, behavior, and information technology (IT) information processes.

### B.1.4 Confidentiality

RPMS users shall:
• Be aware of the sensitivity of electronic and hard copy information and protect it accordingly.
• Store hard copy 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 Health Insurance Portability and Accountability Act (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.

### B.1.5 Integrity

RPMS users shall:
• Protect their systems 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 their manager’s written permission and without scanning it for viruses first.
B.1.6 System Logon

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 five successive failed login attempts within a specified time period (e.g., one hour).

B.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 passwords immediately if password has been seen, guessed, or otherwise compromised, and report the compromise or suspected compromise to their ISSO.
• Keep user identifications (IDs) 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 eight 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.

B.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.

B.1.9 Reporting
RPMS users shall:
• Contact and inform their ISSO that they 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.

B.1.10 Session Timeouts
RPMS system implements system-based timeouts that back users out of a prompt after no more than 5 minutes of inactivity.
RPMS users shall:
• Utilize a screen saver with password protection set to suspend operations at no greater than 10 minutes of inactivity. This will prevent inappropriate access and viewing of any material displayed on the screen after some period of inactivity.

B.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.

B.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.

B.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 nonrecovery of temporary files created in processing sensitive data, virus protection, and intrusion detection, and provide 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) whenever 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.
B.2 RPMS Developers

RPMS developers 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.
• Not access live production systems without obtaining appropriate written access and shall only retain that access for the shortest period possible to accomplish the task that requires the access.
• Observe separation of duties policies and procedures to the fullest extent possible.
• 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.
• Use checksums or other integrity mechanisms when releasing their certified applications to assure the integrity of the routines within their RPMS applications.
• Follow industry best standards for systems they are assigned to develop or maintain and abide by all Department and Agency policies and procedures.
• 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.
• Release any sensitive agency or patient information.

B.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, Chief Information Security Officer (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 backup 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 by 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 and 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.

• Release any sensitive agency or patient information.
# Acronym List

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Meaning</th>
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<tbody>
<tr>
<td>CAC</td>
<td>Clinical Application Coordinator</td>
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<tr>
<td>EHR</td>
<td>Electronic Health Record</td>
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<tr>
<td>EIE</td>
<td>Entered in Error</td>
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<tr>
<td>FFP</td>
<td>Fresh Frozen Plasma</td>
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<tr>
<td>BHS</td>
<td>Health Summary Components</td>
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<td>HIPAA</td>
<td>Health Insurance Portability and Accountability Act</td>
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<td>ID</td>
<td>Identification</td>
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<td>I&amp;O</td>
<td>Intake and Output</td>
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<td>IHS</td>
<td>Indian Health Service</td>
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<td>IVPB</td>
<td>Intravenous Piggyback</td>
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<td>IRM</td>
<td>Information Resources Management</td>
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<td>ISSO</td>
<td>Information System Security Officer</td>
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<td>PPN</td>
<td>Patient Preferred Name</td>
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<td>PEG</td>
<td>Percutaneous Endoscopic Gastrostomy</td>
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<td>PC</td>
<td>Personal Computer</td>
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<td>RPMS</td>
<td>Resource and Patient Management System</td>
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<td>SAC</td>
<td>Standards and Conventions</td>
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<td>TIU</td>
<td>Text Integrated Utility</td>
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<td>VPN</td>
<td>Virtual Private Network</td>
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Contact Information

If you have any questions or comments regarding this distribution, please contact the IHS IT Service Desk.

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