

- Intake
- IV Intake
- Output
- Parameter Level:
 - Toggle–**All** or **User** (default)
 - Mouse Over Text–Selecting **All** displays parameter values across all entities for the user and is read-only. **User level** displays values set at the user level and are editable.
- Default Clinical Range
 - Inpatient Option buttons:
 - Last 8 hours
 - Last 12 hours
 - Today (Last 24 hrs.)
 - One Week
 - Admission, and Encounter
 - Outpatient Option buttons:
 - Last 8 hours
 - Last 12 hours
 - Today (Last 24 hrs.)
 - One Week
 - Encounter
- Maintain Selected Clinical Range across Patients
 - Toggle **No/Yes**. Default initially is **No**.
 - If the user changes the default clinical range defined in parameter settings-based inpatient/outpatient, that clinical range will persist across patient context change if set to **Yes**. If the user wants to reset the **Clinical Range** with it set to **Yes**, right click the **Clinical Range** label on the left of the display and select the menu option **Reset to use Default**.
- Volume Warning Level
 - Numeric **Up/Down** control
 - Mouse over text – **Range: 100-9999**. A border (border font is red) indicates that the user has no default value, and the control is set to the minimum value. Increment by 1000 using **Page Up/Page Down**.
- Grouping

- Toggle **No** or **Yes**
- The **Grouping** option allows the user to view the **Intake/Output** entry types collated into columns at defined time intervals (**10, 30, or 60 minutes**). With **Grouping** turned off, the entries are displayed with a column for each specific entry date/time.
- Group Intervals
 - Option buttons:
 - 10 Minutes
 - 30 Minutes
 - 60 Minutes
- Default Intake Item
 - Option buttons:
 - Irrigation
 - Oral
 - Tube Feeding
 - Other
 - This option enables the user to specify the **Intake Item** that is selected by default for data entry when the **Entry** dialog is opened.
- Default IV Intake
 - Option buttons:
 - Admixture
 - Blood Products
 - Heparin/Saline Lock
 - Hyperal
 - Intralipids
 - Piggyback
 - This option allows the user to specify the **IV Intake Item** that is checked by default for data entry when the entry dialog is opened.
- Default Output Item
 - Option buttons:
 - Blood
 - Drainage
 - Emesis

- Feces
- N/G
- Urine
- Other
- This option enables the user to specify the **Output Item** that is checked by default for data entry when the entry dialog is opened.
- Exclude IV Types
 - Options buttons:
 - Admixture
 - Blood Products
 - Heparin/Saline Lock
 - Hyperal
 - Intralipids
 - Piggyback
 - Click the **Save** button and the system will **save/set** the user settings and it will refresh to update the user view in **Patient I&O** component.
 - Users can also **clear** all settings (Figure 1-4) with **Clear All** button or **Cancel** and close the dialog by clicking **Close**.

Figure 1-4: Toggle All is read only

1.2.2 Component Layout

The **I&O** component (Figure 1-5) is designed for use on inpatients and outpatients depending on the configuration of allowed locations in the parameter **BEHOGMY ALLOW ENTRY LOCATIONS**.

It is divided into three areas:

- Data Presentation Area (red)
- Data Entry and Review Area (green)
- Graphing Area (blue)

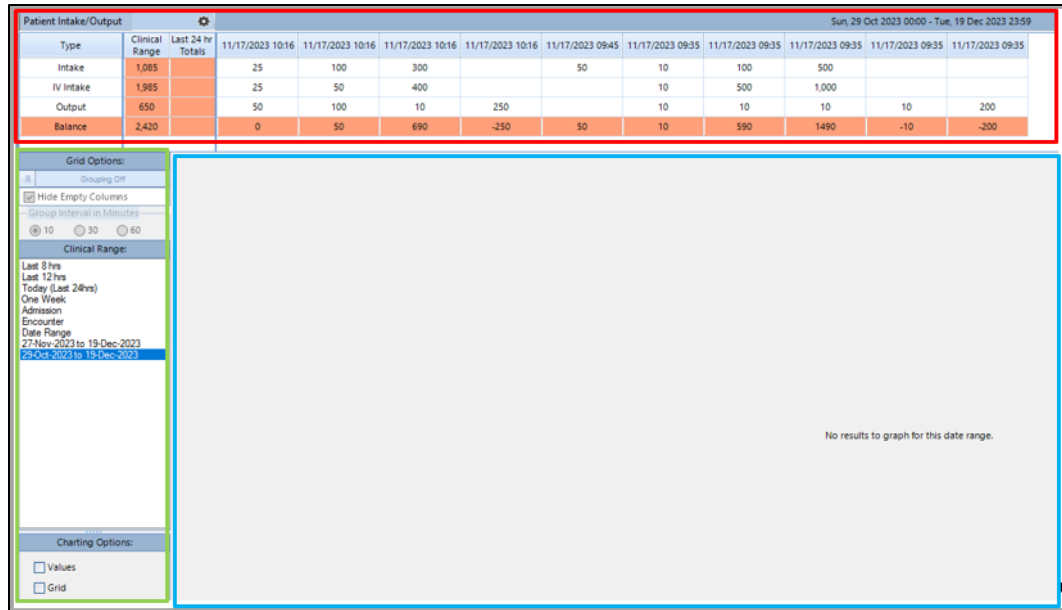


Figure 1-5: Blank I&O Component window

Figure 1-6 shows the Graphing Area with detail.



Figure 1-6: I&O Component with Data Window and Graph

1.2.3 Data Presentation Area

The Data Presentation area enables users to set viewing options for data to display in the **I&O** data grid and graphing area. **Grouping** options and **Clinical Range** options default based on system or user preferences defined in the new **CAC** menu option in RPMS or by a user in the **User Settings** dialog.

1.2.3.1 Grouping Options

Grouping (Figure 1-7, Figure 1-8, Figure 1-9, and Figure 1-10) enables users to view data that has been entered in a summed fashion based on the grouping interval defined (**10, 30, or 60 minutes**). If grouping is disabled, there will be a **Date/Time** column presented in the **I&O** data grid for each date/time there is a data entered.

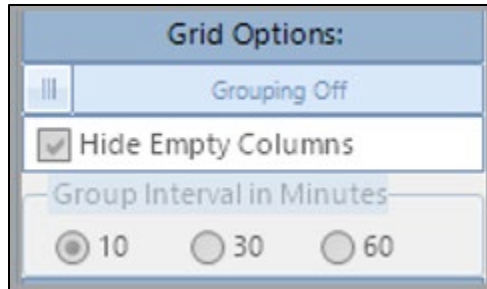


Figure 1-7: Grid Options Grouping Disabled example

Patient Intake/Output			Sun, 29 Oct 2023 00:00 - Tue, 19 Dec 2023 23:55									
Type	Clinical Range	Last 24 hr Totals	11/17/2023 10:16	11/17/2023 10:16	11/17/2023 10:16	11/17/2023 10:16	11/17/2023 09:45	11/17/2023 09:35	11/17/2023 09:35	11/17/2023 09:35	11/17/2023 09:35	11/17/2023 09:35
Intake	1,085		25	100	300		50	10	100	500		
IV Intake	1,985		25	50	400			10	500	1,000		
Output	650		50	100	10	250		10	10	10	10	200
Balance	2,420		0	50	690	-250	50	10	590	1490	-10	-200

Figure 1-8: Grouping and Grouping Intervals Disabled example

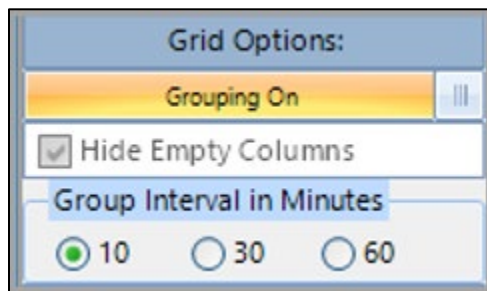


Figure 1-9: Grid Options Grouping On example

Patient Intake/Output			11/17/2023 10:10			11/17/2023 09:40			11/17/2023 09:30		
Type	Clinical Range	Last 24 hr Totals									
Intake	1,085		425			50			610		
IV Intake	1,985		475						1,510		
Output	650		410						240		
Balance	2,420		490			50			1880		

Figure 1-10: Grouping Enabled and Group Interval set (Default is set in User Settings)

1.2.3.2 Clinical Range

The **Clinical Range** area (Figure 1-11 and Figure 1-12) enables the user to determine how far back **I&O** should be displayed. The standard choices are for **Inpatient** and **Outpatient**.

Inpatient

- Last 8hrs
- Last 12hrs
- Today (Last 24hrs)
- One week
- Admission
- Encounter
- Date Range

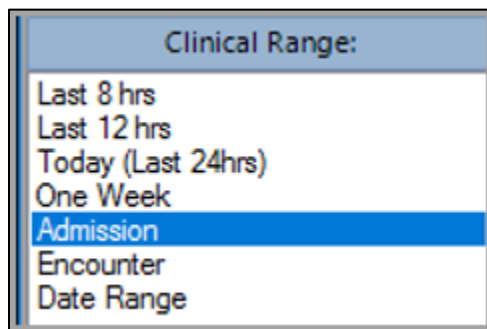


Figure 1-11: Date Range for Most Recent

Outpatient

- Last 8hrs
- Last 12hrs
- Today (Last 24hrs)
- One week
- Encounter
- Date Range

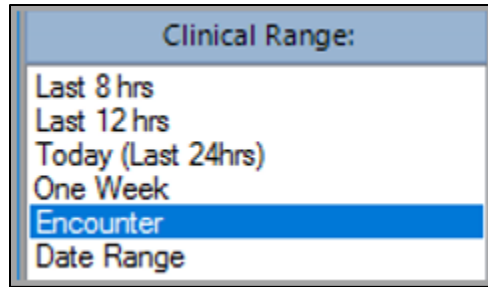


Figure 1-12: Clinical Range default for Outpatient example

If **Date Range** is selected, the user can determine the **Start** and **End** dates on the **Select Retrieval Date Range** (Figure 1-13) dialog.

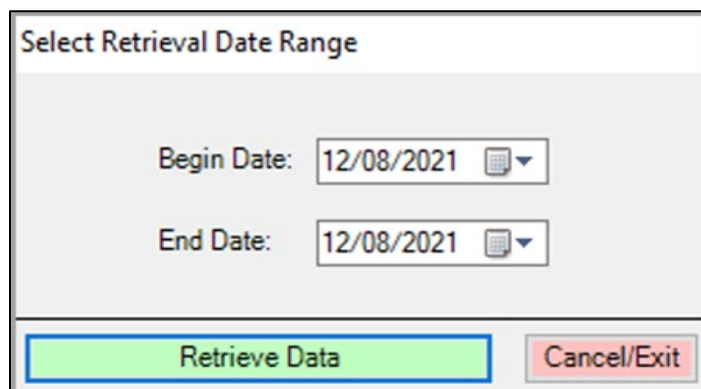


Figure 1-13: Select Retrieval Date Range dialog

1.2.3.3 Charting Options

The **Charting Options** area displays under **Clinical Range** area. A user can enhance graphing by checking the **Values** check box or checking the **Grid** check box or both.

A **Graphing** area presents to the right under the **Data Entry and Review** area.

1.2.4 Data Entry and Review Area

The **I&O Data Grid** table displays with the following columns left to right:

- **Type:** Intake, IV Intake, Output, and Balance
- **Clinical Range:** Data returns based upon Clinical range selected in Data Presentation area
- **Last 24 hrs.:** Totals
- **Date/Time columns:** Date/Time columns display separate Date/Time entries or groups by grouping interval defined in Grouping option in Data Presentation area

When a **patient** and **encounter** are selected, the most recent data is displayed in the top of the window. Items can be selected in order to display in the graphing area as described in Section 1.2.5, or the user can enter a new **Intake & Output Data** as described in Section 1.2.6.

The history appears from earliest date to the most recent (Figure 1-14), similar to the way the display works in the **Vitals** component.

Patient Intake/Output			Sun, 29 Oct 2023 00:00 - Tue, 19 Dec 2023 23:59									
Type	Clinical Range	Last 24 hr Totals	11/17/2023 10:16	11/17/2023 10:16	11/17/2023 10:16	11/17/2023 10:16	11/17/2023 09:45	11/17/2023 09:35	11/17/2023 09:35	11/17/2023 09:35	11/17/2023 09:35	11/17/2023 09:35
Intake	1,085		25	100	300		50	10	100	500		
IV Intake	1,985		25	50	400			10	500	1,000		
Output	650		50	100	10	250		10	10	10	10	200
Balance	2,420		0	50	690	-250	50	10	590	1490	-10	-200

Figure 1-14: Data and Review Area

1.2.5 Graphing Area

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

- Intake
- IV Intake
- Output
- Balance

The graph can have **Values** displayed or a **Grid** added by selecting the check box on the left (Figure 1-15).

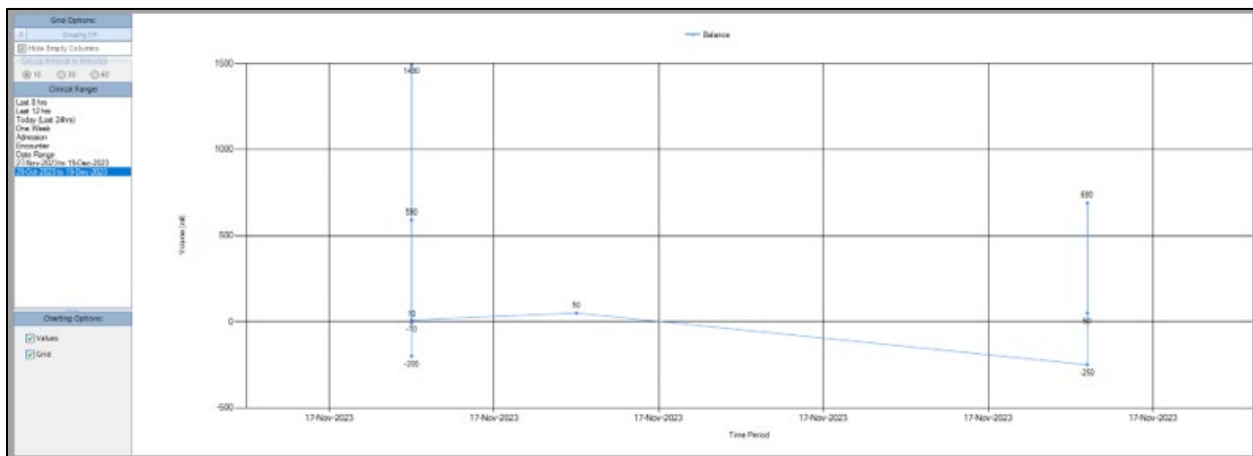


Figure 1-15: I&O History with Values and Grid dialog

1.2.5.1 Data Point Detail

If the user hovers the pointer over any data point, a box appears with a list of all the data-entry details represented by that data point.

If the user **single right-clicks** or **left-clicks** any data point, the details of all the data entered on that date are displayed (Figure 1-16 and Figure 1-17). This is also similar to the **Vital** component.

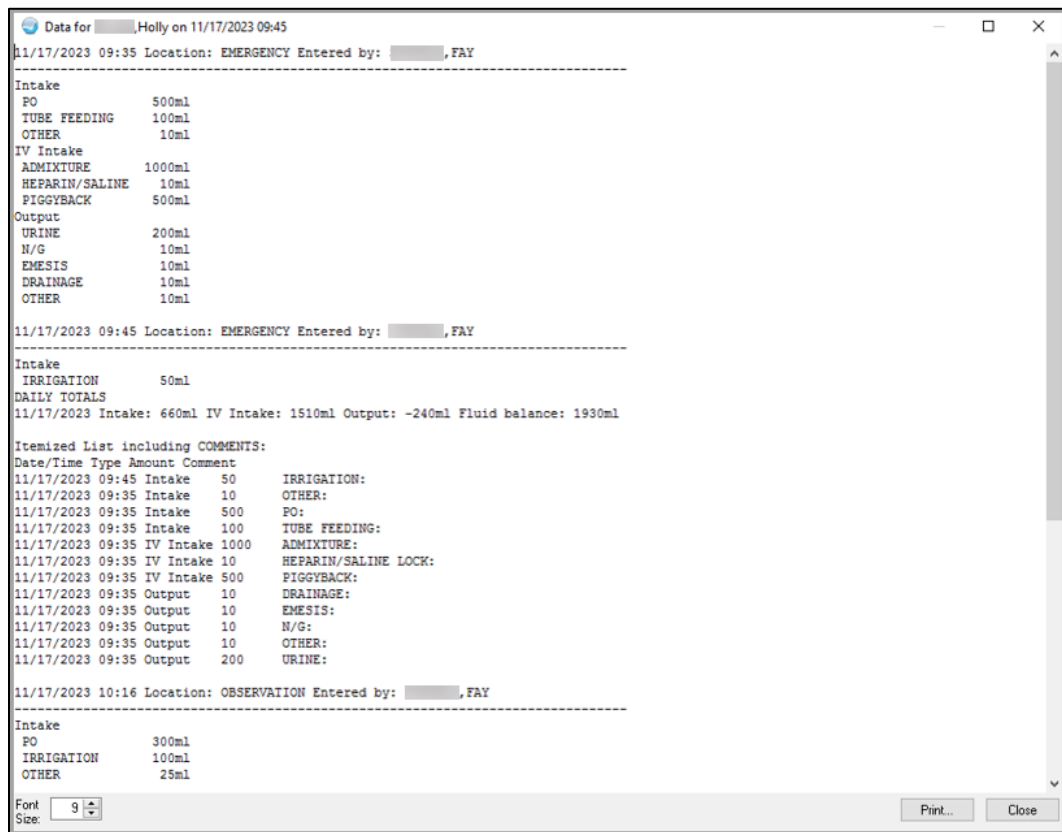


Figure 1-16: Data Point Detail dialog for Outpatient location

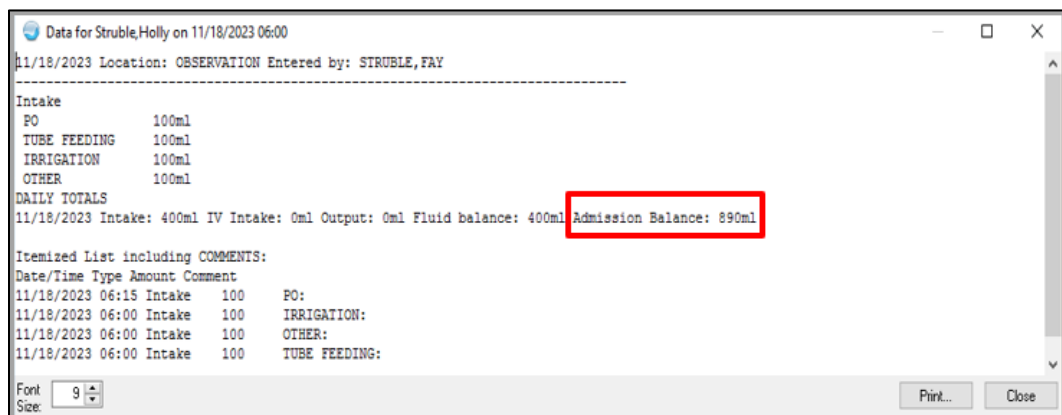
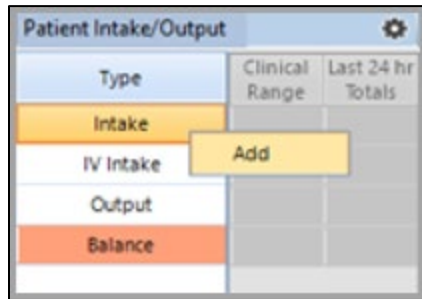


Figure 1-17: Data Point Detail dialog for Admission location

1.2.6 Entering New Data

The user can enter new data by right-clicking a type (**Intake**, **IV Intake**, or **Output**) listed under the **Type** column of the data and review area of the component (Figure 1-18). That is located at the top of the component running the full-length from left to right.

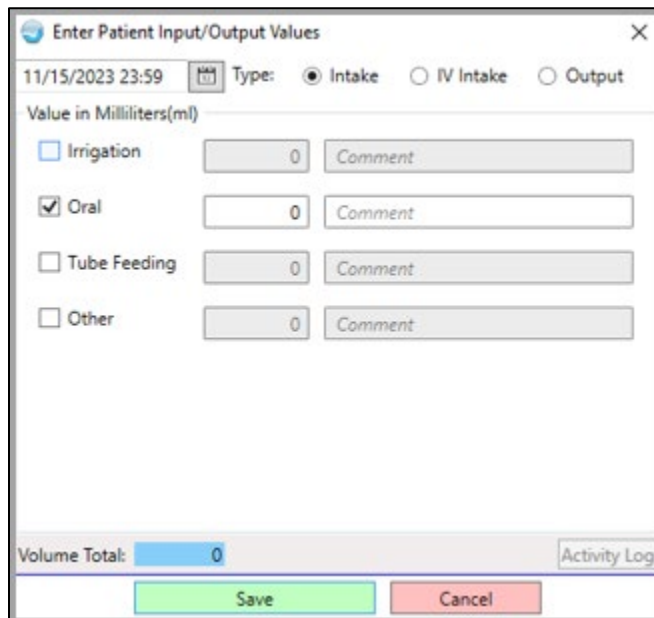


Type	Clinical Range	Last 24 hr Totals
Intake		
IV Intake		
Output		
Balance		

Figure 1-18: Patient Intake/Output column

The **Enter Patient Input/Output Values** dialog (Figure 1-19) opens with the default-type option button selected based on the right-click type selection. The dialog will also enable a subtype for immediate data entry if the following parameters are defined:

- **BEHOGLMY INTAKE DEFAULT ITEM**
- **BEHOGLMY IV DEFAULT ITEM**
- **BEHOGLMY OUTPUT DEFAULT ITEM**



Enter Patient Input/Output Values

11/15/2023 23:59 Type: Intake IV Intake Output

Value in Milliliters(ml)

Irrigation 0 Comment

Oral 0 Comment

Tube Feeding 0 Comment

Other 0 Comment

Volume Total: 0 Activity Log

Save Cancel

Figure 1-19: Enter Patient Input/Output Values dialog

Date/Time Defaults

- **Admission:**–Current system date/time
- **Discharged Admission:**–Discharge date/time
- **Encounter Outpatient:**–Current system date/time
- **Checked out Outpatient:**–Checkout date/time

The user can also enter new data by right-clicking a **Date/Time** cell (Figure 1-20) for any previously entered **I&O** types. Adding new data this way will default the **Date/Time** from the selected cell and the **I&O** type for the new entry (Figure 1-20).

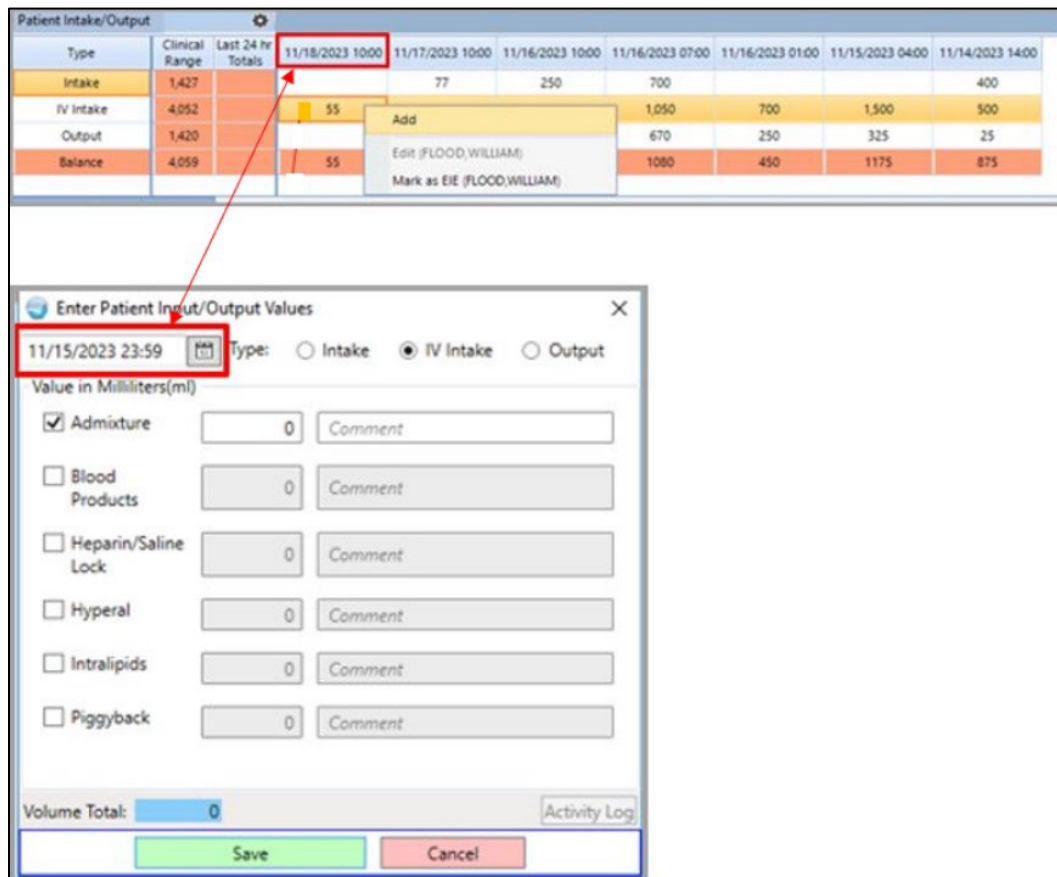


Figure 1-20: Adding New Data Through a Data/Time cell

1.2.6.1 Changing Default Date/Time

The user can change the defaulted **Date/Time** for the entry in the **Enter Patient Input/Output Values** dialog (Figure 1-21). 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.

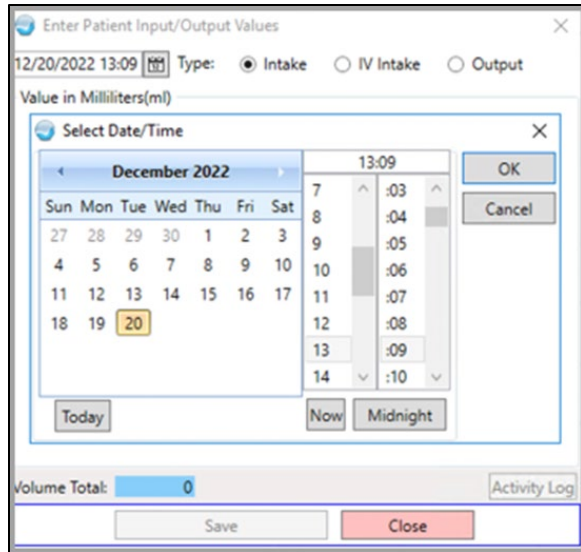


Figure 1-21: Enter Patient Input/Output Values Date Selection dialog

1.2.6.2 Selecting the Type

Once a type is selected, the subtypes that can be used display. Figure 1-22 shows the **Intake Type** dialog with a preselected Intake Item initialized (parameter **BEHOGMY INTAKE DEFAULT ITEM**). The user can select any or all of the subtypes. Units are always in milliliters.

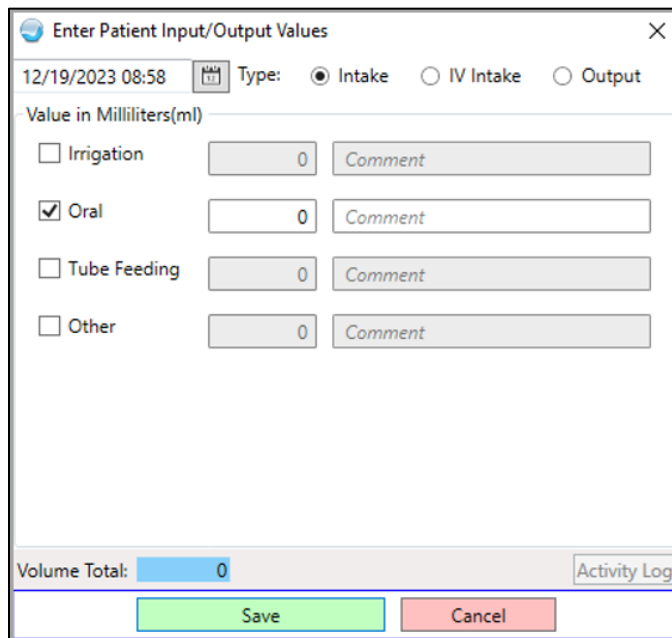


Figure 1-22: Intake Type dialog

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 field (Figure 1-29), and then the user can choose to **Edit** or **Mark as EIE** (Figure 1-30). A menu option will display all entries to the user to select from if grouping is enabled and multiple entries exist for the cell.

Type	Clinical Range	Last 24 hr Totals	11/18/2023 10:00	11/17/2023 10:00	11/16/2023 10:00	11/16/2023 07:00	11/16/2023 01:00	11/15/2023 04:00	11/14/2023 14:00
Intake	1,427			77	250	700			400
IV Intake	4,052		55	237		1,050	700	1,500	500
Output	1,420					670	250	325	25
Balance	4,059		55	314					

Figure 1-29: Editing choices where grouping is enabled and multiple entries are summed in the cell

Type	Clinical Range	Last 24 hr Totals	11/18/2023 10:00	11/17/2023 10:00	11/16/2023 10:00	11/16/2023 07:00	11/16/2023 01:00	11/15/2023 04:00	11/14/2023 14:00
Intake	1,427			77	250	700			400
IV Intake	4,052		55	237	10	1,050	700	1,500	500
Output	1,420				150	670	250	325	25
Balance	4,059		55	314	110	1080	450	1175	8

Figure 1-30: Editing choices where grouping is enabled and a single entry displays in the cell

Note: To edit or mark **EIE**, the user must be in the encounter/admission for that entry, otherwise the dialog will present in read-only mode (Figure 1-31). Only one entry item can be edited or marked **EIE** at a time.

Editing - IV Input (Read-only)

Method: HEPARIN/SALINE LOCK

Capture Date/Time: 11/15/2023 23:59

Volume ml(s): 15

Comment: [Empty]

Buttons: Save, Cancel

Figure 1-31: Editing dialog in read-only mode

1.2.7.1 Editing an Entry

Users can change the **time** and the **value** for an entry (Figure 1-32). The type cannot be edited. Changes must be saved before they are stored.

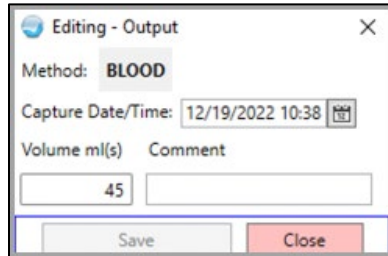


Figure 1-32: Entry Edit dialog

1.2.7.2 Entered in Error

If the item is marked as Entered in Error (**EIE**), a warning message (Figure 1-33) 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.

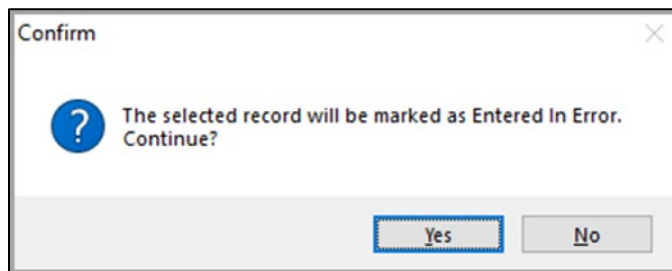


Figure 1-33: Entered in Error warning message

1.3 I&O Reports Setup

This section describes the I&O reports available.

1.3.1 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.

1.3.1.1 Adding the Report

1. To add the report to the appropriate parameter, navigate to the **General Parameter Tools** menu (**XX**) (Figure 1-34), and select **EP....Edit Parameter Values**.



Figure 1-34: General Parameter Tools Menu

- At **Select PARAMETER DEFINITION NAME:** (Figure 1-35), select **ORWRP REPORT LIST....List of reports.**

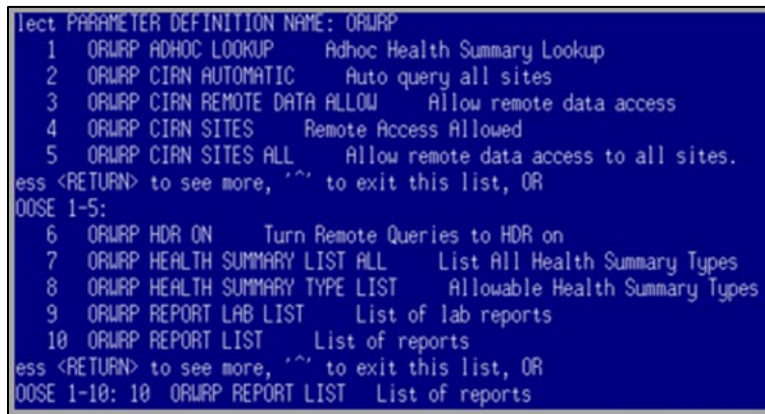


Figure 1-35: Select Parameter Definition Name

- At the **ORWRP REPORT LIST** (Figure 1-36), select **4...System.....SYS...[DEMO.MEDSPHERE.COM]** to set the parameter.

Note: This differs on each site’s system.

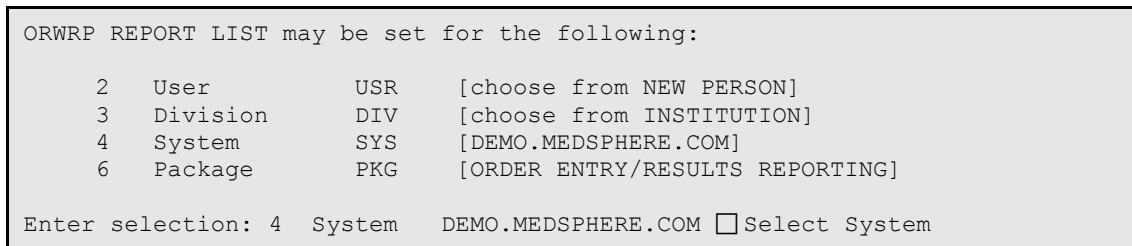


Figure 1-36: Setting ORWRP Report List

- Add a new **sequence number** and enter the new report name, **BEHO I&O SUMMARY** (Figure 1-37).



Figure 1-37: New Sequence Number and Report

1.3.1.2 Viewing the Report

From the **EHR Reports** menu, users can view many different time frames (Figure 1-38). All of the **I&O** for the selected time frame will display in the format shown below. This can be copied and pasted into an EHR note if desired.

I&O Summary [From: Nov 19,2023 to Dec 19,2023]														

STRUBLE, MOLLY 546 MAY 23, 1978 (45 YRS) FEMALE														
UNIT: MED/SURG RM/BED: MS-3														
DIVISION: 2017 DEMO CLINIC														

PATIENT INTAKE/OUTPUT SUMMARY														
NOV 16, 2023@07:29:52 - NOV 20, 2023@13:05:04														
TIME	INTAKE			IV INTAKE			OUTPUT							
	PO	TUBE	IRRIG OTHER	ADMIX	IVPB	LOCK	URINE	N/G	EMESI	DRAIN	FECES	OTHER		

11/16/2023														
07:42	600			1000	50		500	100	50	20				
10:43	250					10					125	25		
11/17/2023														
10:36				222		15								
10:42	144	11	22											
11/18/2023														
10:42					55									
DAILY TOTALS														
11/16/2023	Intake: 950ml			IV Intake: 1060ml		Output: -820ml		Fluid balance: 1190ml						
11/17/2023	Intake: 77ml			IV Intake: 237ml		Output: 0ml		Fluid balance: 314ml						
11/18/2023	Intake: 0ml			IV Intake: 55ml		Output: 0ml		Fluid balance: 55ml						
TOTAL SUMMARY														
Intake: 1027ml			IV Intake: 1352ml		Output: -820ml		Fluid Balance: 1559ml							
FLUID BALANCE														
LAST 24 HOURS:			0ml											
LAST 12 HOURS:			0ml											
LAST 8 HOURS:			0ml											
Admission:			1559ml											
Itemized List including COMMENTS:														
Date/Time	Type	Amount	Comment											
11/16/2023 07:42	Intake	100	OTHER:											
11/16/2023 07:42	Intake	600	PO:											
11/16/2023 07:42	IV Intake	1000	ADMIXTURE:											
11/16/2023 07:42	IV Intake	50	PIGGYBACK:											
11/16/2023 07:42	Output	20	DRAINAGE:											
11/16/2023 07:42	Output	50	EMESIS:											
11/16/2023 07:42	Output	100	N/G:											
11/16/2023 07:42	Output	500	URINE:											
11/16/2023 10:43	Intake	250	PO:											
11/16/2023 10:43	IV Intake	10	HEPARIN/SALINE LOCK:											
11/16/2023 10:43	Output	125	FECES:											
11/16/2023 10:43	Output	25	OTHER:											
11/17/2023 10:36	IV Intake	222	ADMIXTURE:											
11/17/2023 10:36	IV Intake	15	HEPARIN/SALINE LOCK:											

Figure 1-38: OERR Intake and Output Report

1.3.2 Health Summary Report

The **Health Summary Report** component for I&O is included in the **Health Summary Components (BHS), 1.0 patch 20**. 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 **CAC** at the site.

1.3.2.1 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 1-39), select **Number 4** (found within the **VAHS Menu**), **Health Summary Maintenance Menu**.

```

1      Health Summary Coordinator's Menu ...
2      Health Summary Enhanced Menu ...
3      Health Summary Menu ...
4      Health Summary Maintenance Menu ...

```

Figure 1-39: GMTS Manager Menu

3. On the **Health Summary Maintenance Menu** (Figure 1-40), select **Number 3**, **Edit Ad Hoc Health Summary Type**.

```

1      Disable/Enable Health Summary Component
2      Create/Modify Health Summary Components
3      Edit Ad Hoc Health Summary Type
4      Rebuild Ad Hoc Health Summary Type
5      Resequence a Health Summary Type
6      Create/Modify Health Summary Type
7      Edit Health Summary Site Parameters
8      Health Summary Objects Menu ...
9      CPRS Reports Tab 'Health Summary Types List' Menu ...
10     CPRS Health Summary Display/Edit Site Defaults ...

```

Figure 1-40: Health Summary Menu

Selecting **Edit Ad Hoc Health Summary** first displays the following warning message (Figure 1-41):

```

Select Health Summary Maintenance Menu <TEST ACCOUNT> Option: 3 Edit Ad Hoc Health Summary Type

>>> EDITING the GMTS HS ADHOC OPTION Health Summary Type
SUPPRESS PRINT OF COMPONENTS WITHOUT DATA: no//

Do you wish to review the Summary Type structure before continuing? NO//

```

Figure 1-41: Edit Ad Hoc Health Summary Warning Message

The next entry allows users to select this component (Figure 1-42).

4. Enter **IO**.

```

Do you wish to review the Summary Type structure before continuing? NO//
Select COMPONENT: IO

```

Figure 1-42: Select the IO Component

If the **component** is already entered, the following message (Figure 1-43) displays:

```
Select COMPONENT: IO I AND O IO
I AND O is already a component of this summary.

Select one of the following:

E Edit component parameters
D Delete component from summary

Select Action: █
```

Figure 1-43: 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 1-44).

```
SUMMARY ORDER: 1135// 1135
OCCURRENCE LIMIT: 50//
TIME LIMIT: 7D//
HEADER NAME: Intake and Output//
```

Figure 1-44: Ad Hoc Summary

1.3.2.2 Viewing the Health Summary

Once the component has been added to the **Ad Hoc Health Summary** (Figure 1-45), it should be selectable from the **Health Summary Reports Menu** in the **EHR**.

Note: This may display as **AdHoc** or as **GMTS AdHoc**, depending on installation.

The default on this component is **50 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.

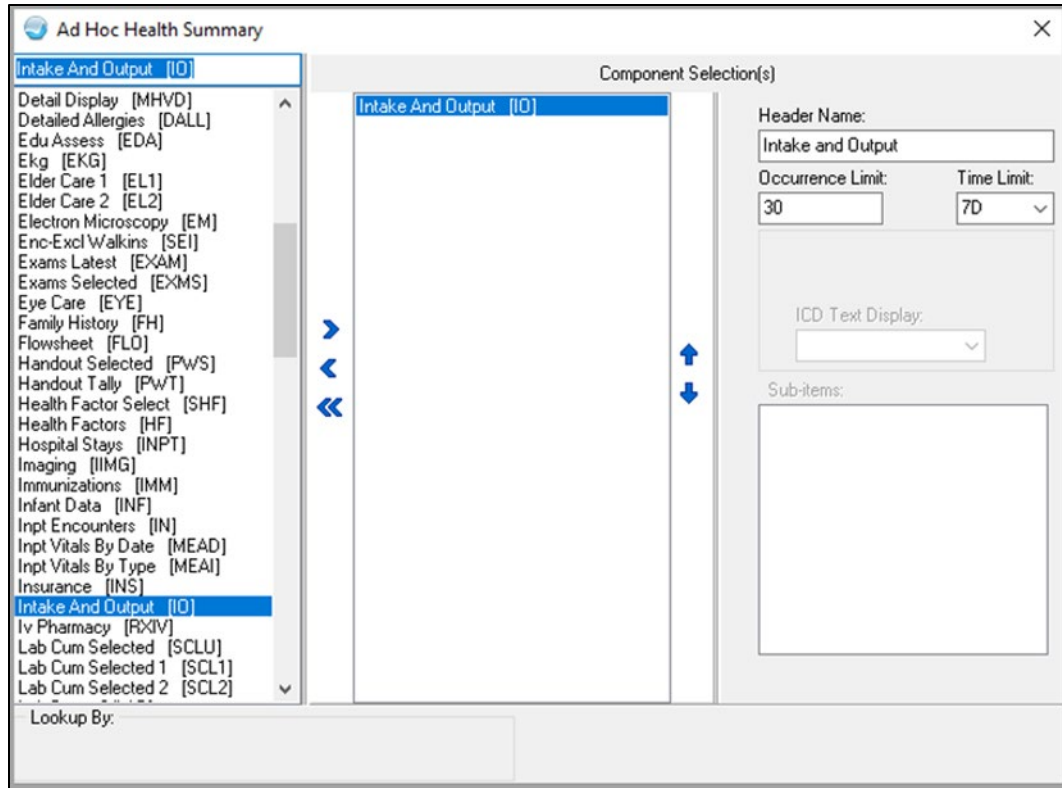


Figure 1-45: Ad Hoc Health Summary dialog

The report will print and look very similar to the **OE/RR report** (Figure 1-46).

Health Summary GMTS Adhoc Report														
,MOLLY 546										DOB: 05/23/1978				
PATIENT INTAKE/OUTPUT SUMMARY														
LOCATION: MED/SURG														
NOV 16, 2023@07:29:52 - NOV 20, 2023@13:05:04														
TIME	INTAKE				IV INTAKE				OUTPUT					
	PO	TUBE	IRRIG	OTHER	ADMIX	IVPB	LOCK	URINE	N/G	EMESI	DRAIN	FECES	OTHER	

11/16/2023														
07:42	600			100	1000	50		500	100	50	20			
10:43	250						10					125	25	
11/17/2023														
10:36					222		15							
10:42	44	11	22											
11/18/2023														
10:42						55								
DAILY TOTALS														
11/16/2023	Intake: 950ml				IV Intake: 1060ml				Output: -820ml				Fluid balance: 1190ml	
11/17/2023	Intake: 77ml				IV Intake: 237ml				Output: 0ml				Fluid balance: 314ml	
11/18/2023	Intake: 0ml				IV Intake: 55ml				Output: 0ml				Fluid balance: 55ml	
TOTAL SUMMARY														
Intake: 1027ml IV Intake: 1352ml Output: -820ml Fluid Balance: 1559ml														
FLUID BALANCE														
LAST 24 HOURS: 0ml														
LAST 12 HOURS: 0ml														
LAST 8 HOURS: 0ml														
Admission: 1559ml														
Itemized List including COMMENTS:														
Date/Time	Type	Amount	Comment											
11/16/2023 07:42	Intake	100	OTHER:											
11/16/2023 07:42	Intake	600	PO:											
11/16/2023 07:42	IV Intake	1000	ADMIXTURE:											
11/16/2023 07:42	IV Intake	50	PIGGYBACK:											
11/16/2023 07:42	Output	20	DRAINAGE:											
11/16/2023 07:42	Output	50	EMESIS:											
11/16/2023 07:42	Output	100	N/G:											
11/16/2023 07:42	Output	500	URINE:											
11/16/2023 10:43	Intake	250	PO:											
11/16/2023 10:43	IV Intake	10	HEPARIN/SALINE LOCK:											
11/16/2023 10:43	Output	125	FECES:											
11/16/2023 10:43	Output	25	OTHER:											
11/17/2023 10:36	IV Intake	222	ADMIXTURE:											
11/17/2023 10:36	IV Intake	15	HEPARIN/SALINE LOCK:											
11/17/2023 10:42	Intake	22	IRRIGATION:											
11/17/2023 10:42	Intake	44	PO: formula											
11/17/2023 10:42	Intake	11	TUBE FEEDING:											
11/18/2023 10:42	IV Intake	55	PIGGYBACK:											

Figure 1-46: Health Summary report

1.3.3 TIU Objects

Several new **TIU Objects** have been included in **TIU 1.0, patch 1029** for **Intake & Output**.

1.3.3.1 I&O-8HRS

This provides a detailed record of all recorded inputs and outputs for the **8-hour period** (Figure 1-47) immediately preceding the insertion of the object into the note.

I&O 8 hours	

Intake	
PO:	400ml
OTHER:	50ml
IV Intake	
ADMIXTURE:	500ml
HYPERAL:	250ml
PIGGYBACK:	75ml
Total Intake:	450ml
Total IV Intake:	825ml
Total Output:	0ml
Total Fluid Balance:	1275ml

Figure 1-47: TIU Object I&O-8HRS

1.3.3.2 I&O-12HRS

This provides a detailed record of all recorded inputs and outputs for the **12-hour period** (Figure 1-48) immediately preceding the insertion of the object into the note.

I&O 12 hours	

Intake	
PO:	400ml
OTHER:	50ml
IV Intake	
ADMIXTURE:	500ml
HYPERAL:	250ml
PIGGYBACK:	75ml
Total Intake:	450ml
Total IV Intake:	825ml
Total Output:	0ml
Total Fluid Balance:	1275ml

Figure 1-48: TIU Object I&O-12HRS

1.3.3.3 I&O-24HRS

This provides a detailed record of all recorded inputs and outputs for the **24-hour period** (Figure 1-49) immediately preceding the insertion of the object into the note.

I&O 24 hours	

Intake	
PO:	500ml
OTHER:	50ml
IV Intake	
ADMIXTURE:	1500ml
HYPERAL:	250ml
PIGGYBACK:	75ml
Output	
URINE:	500ml
Total Intake:	550ml
Total IV Intake:	1825ml
Total Output:	-500ml
Total Fluid Balance:	1875ml

Figure 1-49: TIU Object I&O-24HRS

1.3.3.4 I&O ADM FLUID BALANCE

This object displays the total **fluid balance** (Figure 1-50) from the beginning of the **current admission**.

Admission Fluid Balance	

Admission Fluid Balance:	4520ml

Figure 1-50: TIU Object I&O ADM Fluid Balance

1.3.3.5 I&O FLUID BALANCE

This object displays the total **fluid balance** from the beginning of the **current admission**, along with the **fluid balance** for the **8-**, **12-**, and **24-hours** prior to the insertion of the object into the note (Figure 1-51).

```

I&O Fluid Balance
-----
Last 24 Hours: 1875ml
Last 12 Hours: 1275ml
Last 8 Hours: 1275ml
Admission:      4520ml

Admission Fluid Balance
-----
Admission Fluid Balance: 4520ml

```

Figure 1-51: TIU Object I&O Fluid Balance

1.3.3.6 I&O TOTALS 8HRS

This object displays the **Total Intake**, **IV Intake**, and **Output** for the **8 hours** preceding insertion of the object into the note (Figure 1-52). To display details for each section, use the **I&O-8HRS** object.

```

I&O Totals 8 hours
-----
Total Intake:           450ml
Total IV Intake:        825ml
Total Output:           0ml
Total Fluid Balance:   1275ml

```

Figure 1-52: TIU Object I&O Totals 8HRS

1.3.3.7 I&O TOTALS 12HRS

This object displays the **Total Intake**, **IV Intake**, and **Output** for the **12 hours** preceding insertion of the object into the note (Figure 1-53). To display details for each section, use the **I&O-12HRS** object.

```

I&O Totals 12 hours
-----
Total Intake:           450ml
Total IV Intake:        825ml
Total Output:           0ml
Total Fluid Balance:   1275ml

```

Figure 1-53: TIU Object I&O Totals 12HRS

1.3.3.8 I&O TOTALS 24HRS

This object displays the **Total Intake**, **IV Intake**, and **Output** for the **24 hours** preceding insertion of the object into the note (Figure 1-54). To display details for each section, use the **I&O-24HRS** object.

I&O Totals 24 hours	

Total Intake:	550ml
Total IV Intake:	1825ml
Total Output:	-500ml
Total Fluid Balance:	1875ml

Figure 1-54: TIU Object I&O Totals 24HRS

Objects must be added to a shared template by a site **CAC** so users can insert them into their notes.

All of these objects use the same logic and only differ in the time frame that they use to look up the data, and the level of detail included. Each object displays the entry with the object name.

In the example below (Figure 1-55), the first figure is the **I&O TOTALS 8HRS** showing the totals for the **8-hour period** ending when this template was inserted into the note. To view more details, the user would use the **I&O 8HRS** object instead.

Visit: 12/19/23 GENERAL CLINIC, PEDIATRIC, PROVIDER DEMO MN (Dec 19,23@11:21)	
LOCAL TITLE: GENERAL CLINIC	
DATE OF NOTE: DEC 19, 2023@11:21	ENTRY DATE: DEC 19, 2023@11:22:10
AUTHOR: DEMO, PROVIDER MN	EXP COSIGNER:
URGENCY:	STATUS: UNSIGNED
I&O Totals 8 hours	

Total Intake:	210ml
Total IV Intake:	302ml
Total Output:	0ml
Total Fluid Balance:	512ml

Figure 1-55: I&O Totals for 8-Hour Period

The next figure shows the **I&O 8HRS** with details for each entry (Figure 1-56). The time period is the same, but more detail displays.

Visit: 12/19/23 GENERAL CLINIC, PEDIATRIC, PROVIDER DEMO MN (Dec 19,23@11:21)	
I&O 8 hours	

Intake	
IRRIGATION:	66ml
PO:	77ml
TUBE FEEDING:	67ml
IV Intake	
ADMIXTURE:	250ml
BLOOD/BLOOD PRODUCTS:	50ml
HEPARIN/SALINE LOCK:	2ml
Total Intake:	210ml
Total IV Intake:	302ml
Total Output:	0ml
Total Fluid Balance:	512ml

Figure 1-56: I&O 8HRS with Details for Each Entry

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.

The **Admission Fluid Balance** shows the total since admission (Figure 1-57), and the **I&O Fluid Balance** shows this along with the **8-**, **12-**, and **24-hour** totals. All of these can be copied and pasted into a note.


Admission Fluid Balance

Admission Fluid Balance: 4520ml

Figure 1-57: Admission Fluid Balance totals display

2.0 Evaluation and Management (E&M) Component

The **Evaluation and Management (E&M)** component (Figure 2-1 and Figure 2-2) allows users to select the type and level of service provided at the patient visit. This adds the selected information to the **Visit Services** component and **Historical Services** component.

Note: Run the mouse pointer over the **Info** icon () to the right of the component name (Figure 2-1). The system displays the following mouse-over text:
Some CPT Codes require the user to enter total time. A dialog displays to the user when a CPT CODE row is selected that requires additional information. Enter the total time for the services rendered.

Evaluation and Management								
Office or Other Outpatient Services		Hospital Inpatient and Observation Care Services		Consultations		Emergency Department Services		Home or Residence Services
HOME VISIT	CPT	Description	Time	History And Examination	Medical Decision Making	Age	New PT or Established PT	
CARE PLAN OVERSIGHT SERVICES	99347	HOMERES VST EST SF MDM 20	15 MINUTES	PROBLEM FOCUSED	STRAIGHTFORWARD		Established	
	99348	HOMERES VST EST LOW MDM 30	25 MINUTES	EXPANDED PROBLEM FOCUSED	LOW LEVEL		Established	
	99349	HOMERES VST EST MOD MDM 40	40 MINUTES	DETAILED	MODERATE LEVEL		Established	
PROLONGED SERVICES	99350	HOMERES VST EST HIGH MDM 60	60 MINUTES	COMPREHENSIVE	MODERATE TO HIGH LEVEL		Established	
	99341	HOMERES VST NEW SF MDM 15	20 MINUTES	PROBLEM FOCUSED	STRAIGHTFORWARD		New	
	99342	HOMERES VST NEW LOW MDM 30	30 MINUTES	EXPANDED PROBLEM FOCUSED	LOW LEVEL		New	
	99344	HOMERES VST NEW MOD MDM 60	60 MINUTES	COMPREHENSIVE	MODERATE LEVEL		New	
	99345	HOMERES VST NEW HIGH MDM 75	75 MINUTES	COMPREHENSIVE	HIGH LEVEL		New	

Figure 2-1: Evaluation and Management Default Display (Stop Code defined for Type of Service Home or Residence Services and Level of Service Home Visit)

Evaluation and Management								
Office or Other Outpatient Services		Hospital Inpatient and Observation Care Services		Consultations		Emergency Department Services		Home or Residence Services
OFFICE VISIT	CPT	Description	Time	History And Examination	Medical Decision Making	Age	New PT or Established PT	
PREVENTIVE MEDICINE SERVICES	99211	OFF/O P EST MAY X REQ PHY/QHP	<10 MINUTES	NOT REQUIRED PHY/QHP	BRIEF		Established	
	99212	OFFICE O/P EST SF 10 MIN	10-19 MINUTES	MEDICALLY APPROPRIATE	STRAIGHTFORWARD		Established	
BEHAVIORAL HEALTH CARE MANAGEMENT	99213	OFFICE O/P EST LOW 20 MIN	20-29 MINUTES	MEDICALLY APPROPRIATE	LOW LEVEL		Established	
CARE MANAGEMENT E&M SERVICES	99214	OFFICE O/P EST MOD 30 MIN	30-39 MINUTES	MEDICALLY APPROPRIATE	MODERATE LEVEL		Established	
	99215	OFFICE O/P EST HI 40 MIN	40-54 MINUTES	MEDICALLY APPROPRIATE	HIGH LEVEL		Established	
CARE PLAN OVERSIGHT SERVICES	99202	OFFICE O/P NEW SF 15 MIN	15-29 MINUTES	MEDICALLY APPROPRIATE	STRAIGHTFORWARD		New	
	99203	OFFICE O/P NEW LOW 30 MIN	30-44 MINUTES	MEDICALLY APPROPRIATE	LOW LEVEL		New	
ADVANCE CARE PLANNING EVALUATION AND MANAGEMENT SERVICES	99204	OFFICE O/P NEW MOD 45 MIN	45-59 MINUTES	MEDICALLY APPROPRIATE	MODERATE LEVEL		New	
	99205	OFFICE O/P NEW HI 60 MIN	60-74 MINUTES	MEDICALLY APPROPRIATE	HIGH LEVEL		New	

Figure 2-2: Evaluation and Management User Selected Type of Service

2.1 Type of Service

In the **E&M** component (**Current Procedural Terminology (CPT) codes 99202-99499**), there are many types of service. The **American Medical Association (AMA)** classifies them as coding categories. EHR utilizes these types of services as groupings under which providers can select the appropriate level of service of care given to their patient at the time of encounter/visit.

These types of services display as tabs (Figure 2-3) across the top of the E&M component. RPMS can be configured to default a type of service and a level service by stop code (**Clinic Stop**).

- Office or Other Outpatient Services
- Hospital Inpatient and Observation Care Services
- Consultations
- Emergency Department Services
- Nursing Facility Services
- Home or Residence Services



Figure 2-3: Type of Service tabs

You must have a visit selected to select from the Type of Service and Level of Service panels.

2.2 Level of Service

The **Level of Service** for each type of service displays in the **Level of Service** menu (Figure 2-4).



Figure 2-4: Sample Level of Service Menu for Office or other Outpatient Services

Once a **Level of Service** is either defaulted or selected by the user, a **CPT Date Grid** (Figure 2-5) displays to the right.

Type of Service	Level of Service
Office or Other Outpatient Services	OFFICE VISIT
	CASE MANAGEMENT SERVICES
	CARE PLAN OVERSIGHT SERVICES
	PREVENTIVE MEDICINE SERVICES
	NON-FACE-TO-FACE E&M SERVICES
	SPECIAL E&M SERVICES
	REMOTE PHYSIOLOGIC MONITORING SERVICES
	BEHAVIORAL HEALTH CARE MANAGEMENT
	PSYCHIATRIC COLLABORATIVE CARE MANAGEMENT SERVICES
	TRANSITIONAL CARE EVALUATION AND MANAGEMENT SERVICES
	ADVANCE CARE PLANNING EVALUATION AND MANAGEMENT SERVICES
	OTHER EVALUATION AND MANAGEMENT SERVICES
	PROLONGED SERVICES
CONSULTATIONS	OFFICE CONSULTATION
	INPATIENT CONSULTATION
	NON-FACE-TO-FACE E&M SERVICES
	SPECIAL E&M SERVICES
Hospital Inpatient and Observation Care Services	INITIAL HOSPITAL INPATIENT SERVICES
	SUBSEQUENT HOSPITAL INPATIENT SERVICES
	HOSPITAL INPATIENT SERVICES
	PROLONGED SERVICES
	NEWBORN CARE SERVICES
	DELIVERY/BIRTHING ROOM SERVICES
	PEDIATRIC & NEONATAL CRITICAL CARE SVCS
Emergency Department Services	EMERGENCY DEPT VISIT
	CRITICAL CARE SERVICES
	PROLONGED SERVICES
Nursing Facility Services	INITIAL NURSING FACILITY CARE
	SUBSEQUENT NURSING FACILITY CARE
	NURSING FACILITY DISCHARGE
	CARE PLAN OVERSIGHT SERVICES
	PROLONGED SERVICES
Home or Residence Services	HOME VISIT
	CARE PLAN OVERSIGHT SERVICES
	PROLONGED SERVICES

Figure 2-5: List of Level of Service by Type of Service

Figure 2-6 displays **CPT Code** rows that contain additional information to aid in the selection of the correct visit service. The table contains the information from the **CPT Code** file in RPMS including:

- CPT
- Short Description
- Time
- History and Examination
- Medical Decision Making
- Age
- New PT or Establish PT (Patient type)

OFFICE VISIT	CPT	Description	Time	History And Examination	Medical Decision Making	Age	New PT or Established PT
PREVENTIVE MEDICINE SERVICES	99211	OFF/OP EST MAY X REQ PHY/QHP	<10 MINUTES	NOT REQUIRED PHY/QHP	BRIEF		Established
	99212	OFFICE O/P EST SF 10 MIN	10-19 MINUTES	MEDICALLY APPROPRIATE	STRAIGHTFORWARD		Established
BEHAVIORAL HEALTH CARE MANAGEMENT	99213	OFFICE O/P EST LOW 20 MIN	20-29 MINUTES	MEDICALLY APPROPRIATE	LOW LEVEL		Established
	99214	OFFICE O/P EST MOD 30 MIN	30-39 MINUTES	MEDICALLY APPROPRIATE	MODERATE LEVEL		Established
CARE MANAGEMENT E&M SERVICES	99215	OFFICE O/P EST HI 40 MIN	40-54 MINUTES	MEDICALLY APPROPRIATE	HIGH LEVEL		Established
CARE PLAN OVERSIGHT SERVICES	99202	OFFICE O/P NEW SF 15 MIN	15-29 MINUTES	MEDICALLY APPROPRIATE	STRAIGHTFORWARD		New
	99203	OFFICE O/P NEW LOW 30 MIN	30-44 MINUTES	MEDICALLY APPROPRIATE	LOW LEVEL		New
ADVANCE CARE PLANNING EVALUATION AND MANAGEMENT SERVICES	99204	OFFICE O/P NEW MOD 45 MIN	45-59 MINUTES	MEDICALLY APPROPRIATE	MODERATE LEVEL		New
	99205	OFFICE O/P NEW HI 60 MIN	60-74 MINUTES	MEDICALLY APPROPRIATE	HIGH LEVEL		New

Figure 2-6: Level of Service CPT Data Grid Table

Making selections in this table adds visit data to the **Visit Services** component. Any row in the grid contains the **View CPT Long Name** option on the right-click menu (Figure 2-7).

CPT	Description	Time	History And Examination
99347	HOME/RES VST EST SF MDM 20	15 MINUTES	PROBLEM FOCUSED
99348	HOME/RES VST EST LOW MDM 30	25 MINUTES	EXPANDED PROBLEM FOCUSED
99349	HOME/RES VST EST MOD MDM 40	40 MINUTES	DETAILED
✓ 99350	HOME/RES VST EST HIGH MDM 60	60 MINUTES	COMPREHENSIVE
99341	HOME/RES VST NEW SF MDM 15	20 MINUTES	PROBLEM FOCUSED
99342	HOME/RES VST NEW LOW MDM 30	30 MINUTES	EXPANDED PROBLEM FOCUSED
99344	HOME/RES VST NEW MOD MDM 60	60 MINUTES	COMPREHENSIVE
99345	HOME/RES VST NEW HIGH MDM 75	75 MINUTES	COMPREHENSIVE

Figure 2-7: Right-Click menu option

Select this option to display the **CPT Long Name** in a pop-up (Figure 2-8).

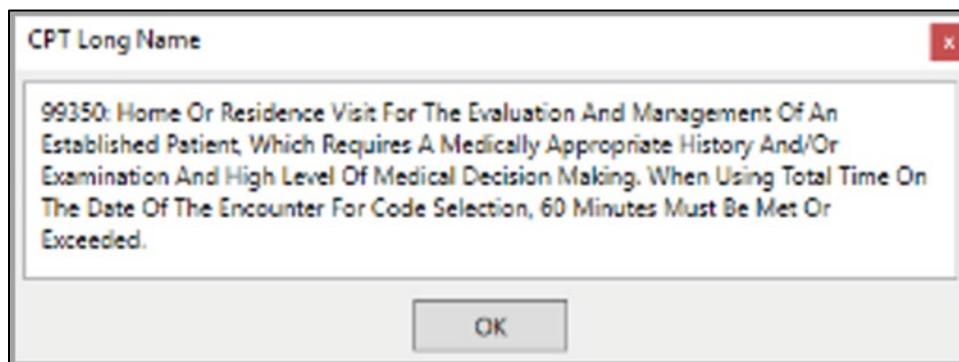


Figure 2-8: CPT Long Name display

When the text of this display is highlighted, the user can right-click it to view a pop-up menu enabling the user to copy and paste the text.

Click **OK** to dismiss the display.

2.3 Customizing the Evaluation and Management Display

The new module allows users to customize the **E&M** 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.

2.3.1 Columns

When the component is released, there are seven columns initially displayed in the **E&M**. Some users may need to see all seven, 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. The **CPT Code** cannot be hidden from any user view, as it is a required column to display.

- To hide a column, right-click any column header.

Note: Be aware that left-clicking a column sorts it. Right-click displays the list of all the columns that can be hidden.

Note: **CPT Code** does not appear on this list and cannot be hidden.

- All columns that are selected (with check marks) will display (Figure 2-9). If a user does not want to see a particular column, such as Description or History And Examination, 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.

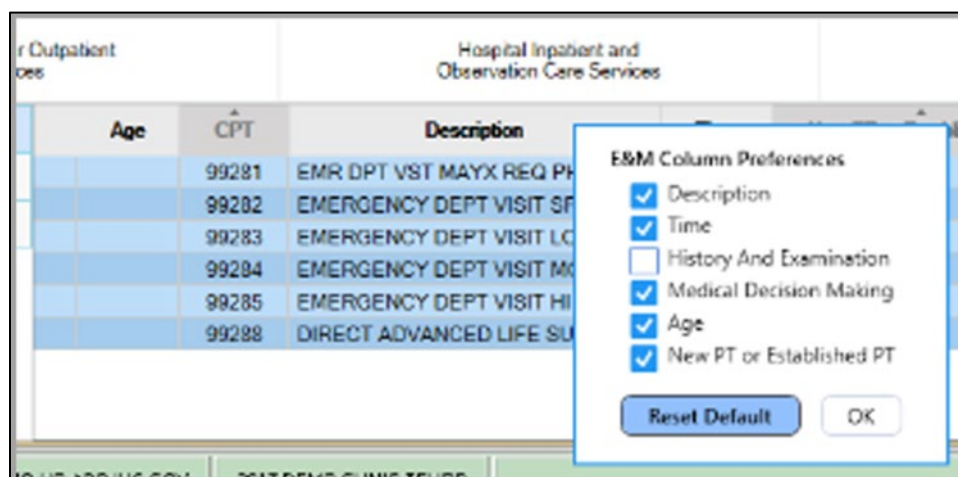


Figure 2-9: Columns Selected (with check marks) example

Note: To restore the original seven columns, simply click **Reset Default**.

- Hiding some columns may improve the display for the user, as in Figure 2-10.

HOME VISIT	CPT	Description	Time	Age	New PT or Established PT
CARE PLAN OVERSIGHT SERVICES	99358	PROLONG SERVICE W/O CONTACT	60 MINUTES		Both
PROLONGED SERVICES	99359	PROLONG SERV W/O CONTACT ADD	+30 MINUTES		Both
	99360	PHYSICIAN STANDBY SERVICES	30 MINUTES		Both

Figure 2-10: E&M display with less columns

2.3.2 Sorting

Each column can be sorted in multiple ways (Figure 2-11).

CPT	Description	Time	Age	New PT or Established PT
-----	-------------	------	-----	--------------------------

Figure 2-11: Default Sort for E&M Component

- Left-clicking sorts by ascending in the CPT column.
- Left-clicking again sorts by descending.
- Left-clicking a third time removes all sorting on the select column.

2.3.3 Rearranging Columns

Columns can be rearranged for a particular user (Figure 2-12). A user may want to move **Medical Decision Making** information to the far right, and display **Age** 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.

Age	CPT	Description	Time	New PT or Established PT	Medical Decision Making
	99347	HOME/RES VST EST SF MDM 20	15 MINUTES	Established	STRAIGHTFORWARD
	99348	HOME/RES VST EST LOW MDM 30	25 MINUTES	Established	LOW LEVEL
	99349	HOME/RES VST EST MOD MDM 40	40 MINUTES	Established	MODERATE LEVEL
	99350	HOME/RES VST EST HIGH MDM 60	60 MINUTES	Established	MODERATE TO HIGH LEVEL
	99341	HOME/RES VST NEW SF MDM 15	20 MINUTES	New	STRAIGHTFORWARD
	99342	HOME/RES VST NEW LOW MDM 30	30 MINUTES	New	LOW LEVEL
	99344	HOME/RES VST NEW MOD MDM 60	60 MINUTES	New	MODERATE LEVEL
	99345	HOME/RES VST NEW HIGH MDM 75	75 MINUTES	New	HIGH LEVEL

Figure 2-12: Columns Rearranged example

2.4 Adding Service Information to Visit Services

Make sure a **patient** and a **visit** are selected.

2.4.1 Adding Simple CPT Codes

The following information describes how to add **E&M service information** to the **Visit Services** component:

- EHR will default a type of service depending on the encounter/visit location. You can change the default by selecting another the **Type of Service** tabs (Figure 2-13) or drop-down list.



Figure 2-13: Type of Service displayed as tabs

The system displays **Type of Service** as a drop-down list (Figure 2-14) if the component is displayed in EHR in a small area.

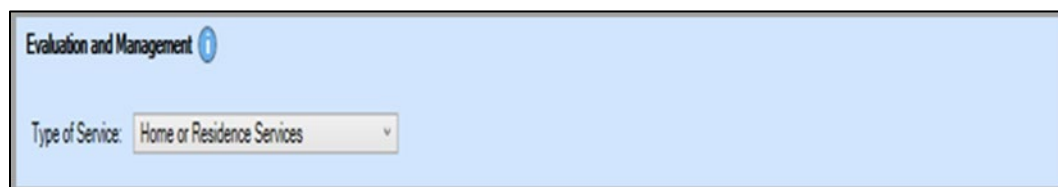


Figure 2-14: Type of Service displayed as a drop-down list

The corresponding levels of service display in the left-hand menu (Figure 2-15) set by categories depending on the **Type of Service** selected.



Figure 2-15: Level of Service Menu Options

1. Select the **row** for the **level of service** (Figure 2-16) you want. In most cases you will only be able to select one item, but some types of service can have more than one item selected.

Evaluation and Management							
Office or Other Outpatient Services		Hospital Inpatient and Observation Care Services		Consultations		Emergency Department Services	
HOME VISIT	CPT	Description	Time	History And Examination	Medical Decision Making	Age	New PT or Established PT
CARE PLAN OVERSIGHT SERVICES	99347	HOME/RES VST EST SF MDM 20	15 MINUTES	PROBLEM FOCUSED	STRAIGHTFORWARD		Established
	99348	HOME/RES VST EST LOW MDM 30	25 MINUTES	EXPANDED PROBLEM FOCUSED	LOW LEVEL		Established
PROLONGED SERVICES	99349	HOME/RES VST EST MOD MDM 40	40 MINUTES	DETAILED	MODERATE LEVEL		Established
	99350	HOME/RES VST EST HIGH MDM 60	60 MINUTES	COMPREHENSIVE	MODERATE TO HIGH LEVEL		Established
	99341	HOME/RES VST NEW SF MDM 15	20 MINUTES	PROBLEM FOCUSED	STRAIGHTFORWARD		New
	99342	HOME/RES VST NEW LOW MDM 30	30 MINUTES	EXPANDED PROBLEM FOCUSED	LOW LEVEL		New
	99344	HOME/RES VST NEW MOD MDM 60	60 MINUTES	COMPREHENSIVE	MODERATE LEVEL		New
	99345	HOME/RES VST NEW HIGH MDM 75	75 MINUTES	COMPREHENSIVE	HIGH LEVEL		New

Figure 2-16: Select the Row for the Level of Service

- For **Office Visit, Home Visit, and Preventive Medicine** types of service, the system will sort to the top **New PT** or **Established PT** based on patient type in RPMS.
- After completing this process, the information is added to the **Visit Services** component (Figure 2-17), as well as to the **Historical Services** component (Figure 2-18).

Visit Services									
Code	Narrative	Qty	Diagnosis	Prim	Modifier 1	Modifier 2	Provider	Code Name	Visit Date
99350	Home/res Vst Est High Mdm 60	1		Y			.FAY	Home/res Vst Est High Mdm 60	01/03/2024

Figure 2-17: CPT Code added to Visit Services component

Historical Services									
Visit Date	CPT Code	Description	Facility	Qty	Diagnosis	Prim	Modifier 1	Modifier 2	
01/03/2024	99350	HOME/RES VST EST HIGH MDM 60	2017 Demo Clinic Tehrb	1		Y			
09/09/2022	99285	EMERGENCY DEPT VISIT HI MDM	2017 Demo Clinic Tehrb	1		Y			
09/09/2022	99291	CRITICAL CARE FIRST HOUR	2017 Demo Clinic Tehrb	1		N			

Figure 2-18: CPT Code added to Historical Service component

If you clear the selection in the Level of Service data grid table, this removes the information from the Visit Services and Historical Services components.

2.4.2 Adding CPT Codes Needing Additional Information

If a user selects a **CPT Code** that requires to know how much time was spent with the patient, the system will prompt the user if that code is selected (Figure 2-19, Figure 2-20, Figure 2-21, and Figure 2-22). You can tell if that code requires information by the time field. For example, **Time-+30 Minutes** meaning every thirty min, **+20 Minutes** every 20 minutes.

Evaluation and Management ⓘ						
Type of Service: Home or Residence Services						
HOME VISIT	CPT	Description	Time	Age	New PT or Established PT	
CARE PLAN OVERSIGHT SERVICES	99358	PROLONG SERVICE W/O CONTACT	60 MINUTES		Both	
✓	99359	PROLONG SERV W/O CONTACT ADD	+30 MINUTES		Both	
PROLONGED SERVICES	99360	PHYSICIAN STANDBY SERVICES	30 MINUTES		Both	

Figure 2-19: CPT Code selected needing Total Time dialog

CPT Code Total Time Entry

Please enter total time for service

CPT: 99359
PROLONG SERV W/O CONTACT ADD

Patient Care: Both

Figure 2-20: Total Time Entry dialog defaulted to CPT Code base time

CPT Code Total Time Entry

Please enter total time for service

CPT: 99359
PROLONG SERV W/O CONTACT ADD

Patient Care: Both

Figure 2-21: Entering Total Time dialog

Visit Services ⓘ									
Code	Narrative	Qty	Diagnosis	Prim	Modifier 1	Modifier 2	Provider	Code Name	Visit Date
99359	Prolong Serv W/o Contact Add	5		Y			,FAY	160:30	01/03/2024

Figure 2-22: CPT Code and Total Quantity Added to Visit Services component

Appendix A 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 with a copy of the Rules of Behavior (ROB) and must acknowledge that they have received and read them prior to being granted access to an RPMS system, in accordance 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.cfmhttp://security.ihs.gov/>.

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

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

A.1 All RPMS Users

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

A.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.

A.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.

A.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.

A.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.

A.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.

A.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).

A.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.

A.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.

A.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.

A.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.

A.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.

A.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.

A.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.

A.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.

A.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 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.

Contact Information

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

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

Web: <https://www.ihs.gov/itsupport/>

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