Medsphere Systems Corporation

OpenVista 2018.1.5 Release Notes

November 2018

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Release 2018.1.5 Enhancements

CareVue

Clinics radio button disabled; can be re-enabled for scheduling interface

The Clinics radio button is currently disabled and does not display on the Patient Selection window in CareVue. New functionality enables future use of the radio button in the event clients use a scheduling interface. Contact Medsphere Customer Care for assistance with enabling the Clinics radio button if a scheduling interface is in place and clinics have configured start/stop times, length of appointment, overbooking, etc.

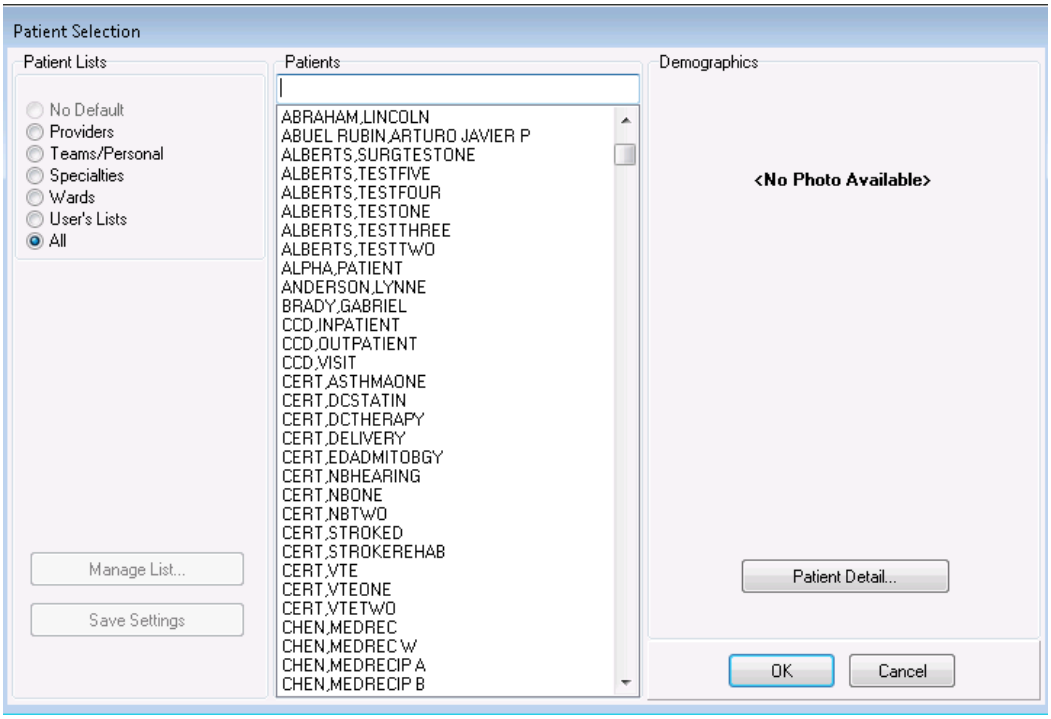

Figure 1: The Patient Selection window without the Clinics radio button

Use FileMan to enable the Clinics radio button if a scheduling interface is in place and clinics have configured start/stop times, length of appointment, overbooking, etc.

To enable the Clinics radio button in CareVue:

```
Input to what File: BEH PATIENT LIST//    (8 entries)
EDIT WHICH FIELD: ALL//

Select BEH PATIENT LIST NAME: Clinics
NAME: Clinics//
FLAGS: DELMN//
ENTITY: Clinic//
SEQUENCE: 40//
DISABLE: NO
PATIENT RETRIEVAL: D CLINPTS^BEHOPTP1(.DATA,IEN,START,END)
          Replace
```


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```
ITEM RETRIEVAL: D HOSPLOC^BEHOPTP1(.DATA,.FROM,.DIR,.MAX,"C",START,END)
          Replace
LIST MANAGEMENT:
SCREEN:
```

Related artifact: 21287

Inpatient length of stay added to encounter settings

The encounter settings button in CareVue now includes inpatient length of stay information. The length of stay is calculated using the number of midnights since admission.

Figure 2: Encounter settings with length of stay information

Required action: Open a patient record and confirm length-of-stay information.

Related artifact: 21359

New functionality added to Orders, Problems tab, Diagnosis tab

A new prompt for use with generic order configuration presents active patient problems and an Other option in a drop-down field, which enables selection of a new problem. The problem and diagnosis selected during the ordering process are saved in the ORDERS, PROBLEMS and V POV files. The problem and SNOMED code are displayed in the Problems tab and on the order Detailed Display. The diagnosis and CPT code are displayed in the Diagnosis tab.

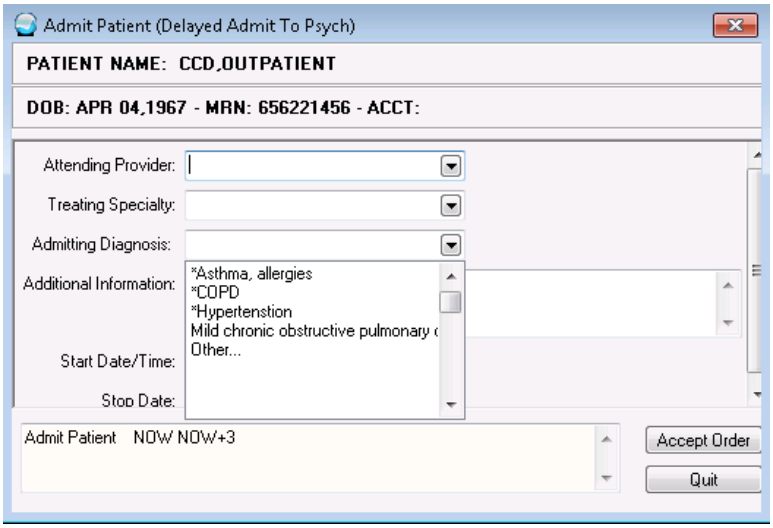

Figure 3: The Admit Patient window options

Date of Onset and Provider Text fields display when the user places an order with the new prompt for diagnosis. If an existing problem is selected from the Active Problem drop-down, the date of onset for the existing problem is used. When the problem selected is new or inactive, the user sees the Add Problem and Primary Visit Diagnosis window and can enter the date of onset and provider narrative information.

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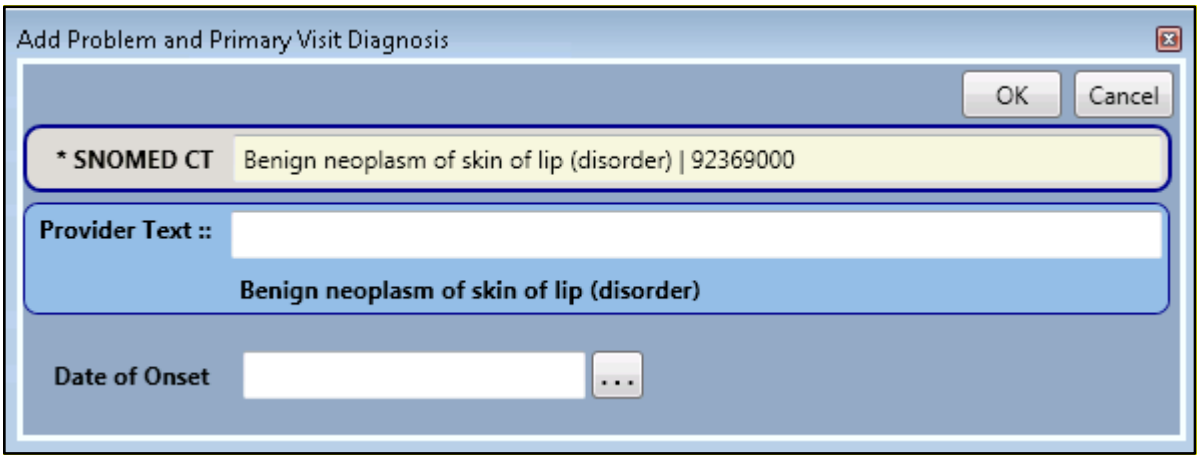

Figure 4: Add Problem and Primary Visit Diagnosis window

Add the new MSC OR GTX PROBLEM prompt to ADT generic orders in any sequence. When using the new MSC OR GTX PROBLEM prompt, configure the fields below in red exactly as shown.

```
Select PROMPT: 9
SEQUENCE: 9//
PROMPT: MSC OR GTX PROBLEM          pointer to a file
INDEX: MSC
SCREEN: I $$GET1^DIQ(9000011,Y_",",.12,"I")="A"
SPECIAL LOOKUP ROUTINE:
DISPLAY TEXT: Admitting Diagnosis:
REQUIRED: YES
MULTIPLE VALUED:
ASK ON EDIT ONLY:
ASK ON ACTION: C
HELP MESSAGE: Enter the patient's admitting diagnosis.
XECUTABLE HELP:
ASK ON CONDITION:
INPUT TRANSFORM:
DEFAULT:
POST-SELECTION ACTION:
ENTRY ACTION:
EXIT ACTION:
ORDER TEXT SEQUENCE: 7// 9
FORMAT: .05
OMIT TEXT:
LEADING TEXT: Admitting Diagnosis:
TRAILING TEXT:
START NEW LINE: YES

Select PROMPT:
Auto-accept this order? NO//
Do you want to test this dialog now? - do not attempt to test an order
dialog with this prompt.  This code strictly is for use in the CareVue.
```

Other fields above (those in black) in this configuration can be determined by the site.

Selecting an Admitting Problem and Diagnosis

Select problems from the drop-down menu, which is based on existing active problems for the patient. If an existing active problem is not applicable, select the Other option to access the problems text search function and select a new problem.

Selecting a Problem and Diagnosis from the List of Active Problems

Select an existing active problem on the patient chart to add the CPT diagnosis code associated with the problem to the Diagnosis tab and save it to the V POV file. The associated diagnosis becomes the primary diagnosis for the visit; the problem is also included in the order Detailed Display.

Selecting a Problem and Diagnosis using the 'Other' Search Option

Select a problem using the Other search option to add the problem and SNOMED code to the Problems tab, add the associated diagnosis and CPT code to the Diagnosis tab, mark the diagnosis as primary for the visit and include the problem will be included in the order Detailed Display.

If the problem selected using the Other search option is on the patient record but inactive, it is activated. The associated diagnosis and CPT code are added to the Diagnosis tab, marked as the primary diagnosis for the visit and the problemis included in the order Detailed Display.

If the problem selected using the Other search option is already active, the user receives a message that they have selected an active problem, which is highlighted for in the drop down of the prompt. The associated diagnosis and CPT code are added to the Diagnosis tab, the diagnosis becomes primary for the visit and the problem is included in the order Detailed Display.

Sites Utilizing Cloud Hosting Services

Include the following in the deployment process for cloud hosted sites.

- Launch CareVue in Update mode.
- In design mode > Design menu > Required Services, check Problem Service and click OK.
- Go to Design menu > Save As Template > Save to save over the default template; click OK in the next dialog to replace it.
- Exit design mode and close CareVue.

After these steps, the .dll for the new service is pulled to the run folder; users who log in afterward in non-update mode will not encounter errors using the new generic order prompt.

> **Note:** Include these steps in the deployment process when this release is installed on any cloud system.

Required action: Test in your ADT order workflow.

Related artifacts: 21834, 21355

GUI executables enhance CareVue update process

The CareVue update process now copies to the local CareVue run folder four additional executables: GroupNotes.exe, PatientDashboardsBigBoard.exe, Vitals.exe, and VitalsManager.exe. This allows these executables to be launched with shortcuts to the local run folder and ensures that, once CareVue is updated on any given workstation, the latest versions are being used.

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Required action: Launch CareVue in update mode and verify that the four executables have been copied to the local run folder, e.g., C:\Program Files (x86)\VueCentric*NAMESPACE_NAME*\

> **Note:** Customers may want to change their method of deploying these executables by re-pointing existing shortcuts to the local run folder. This allows any future updates to these executables to occur without the need for manual intervention.

Related artifact: 21443

Update CareVue Orders tab detail view

The Nurse Verified label is changed to Order Verified to reflect the possibility of nurse or respiratory therapy staff verification. The name and title of the verifying entity is also included for clear identification of the staff member who verified the order.

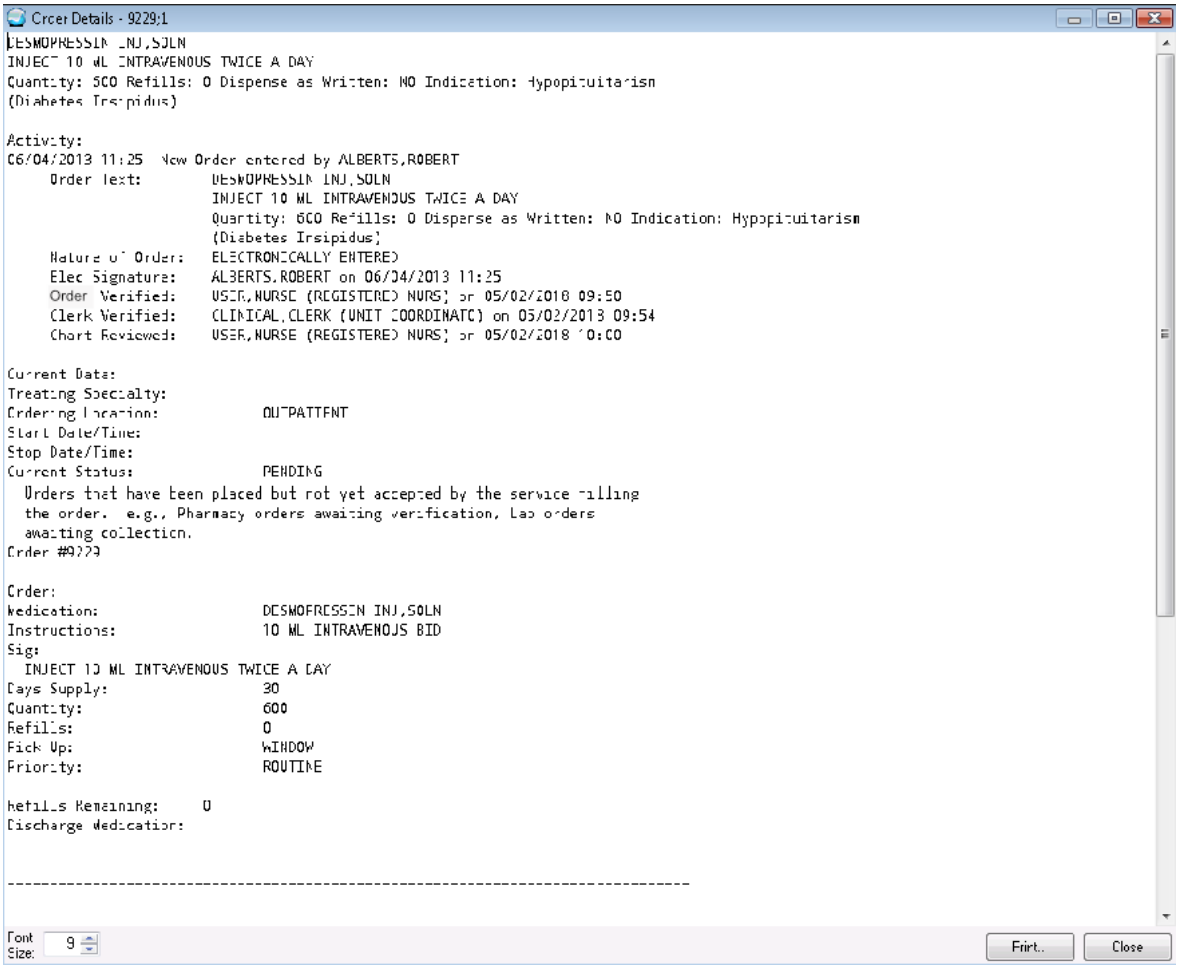

Figure 5: Order Details information

Enhancements accommodate more than two chart reviews in 24-hour period

New CareVue chart review functionality allows more than two chart reviews in a 24-hour period. The initials of the last user to chart review still display in the Orders tab in the Chart column, and the chart review details—user name, title and date/time of the action—continue to display in the Order Details information.

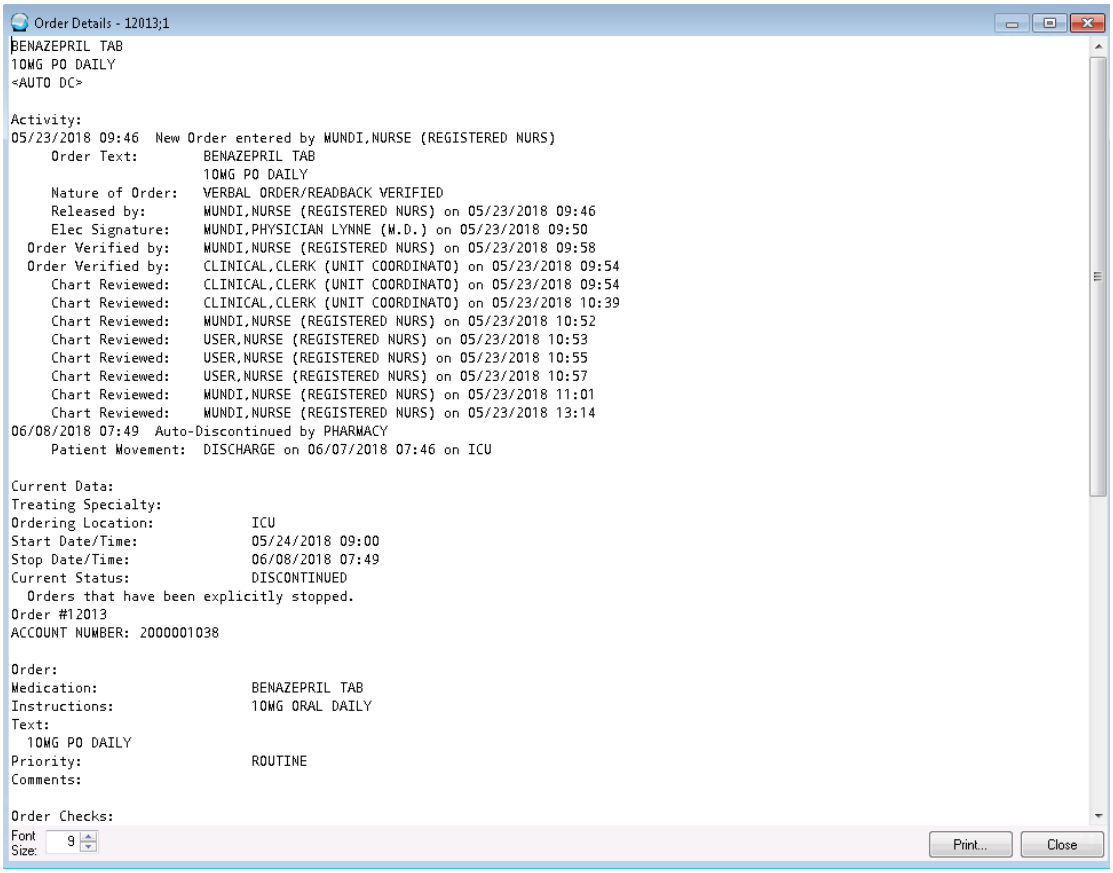

Figure 6: Order Details window

Pre-requisites: The user should hold the ORELSE security key to chart review in the role of registered nurse. The user should hold the OREMAS security key to chart review in the role of administrative staff.

Required action: Test in your chart review workflow.

Related artifact: 21857

New field refines Custom Order Views

A new field has been added to the ORDERABLE ITEMS file called OTHER DISPLAY GROUP. Orders containing orderable items with the new field populated will display in a Custom Order view in the CareVue Orders tab. CareVue customer sites can add a second level of inclusion criteria for medication orders that allows them to be further filtered within the newly defined custom order view. This additional setting filters medication orderables based on medication route.

For help with this configuration please contact Medsphere Support by opening a case at https://support.medsphere.com

Configuration

- **Create a new display group,** e.g., OCCUPATIONAL THERAPY in the PuTTY DISPLAY GROUP file. Add the newly created display group to ALL SERVICES in the DISPLAY GROUP file. Items in the DISPLAY GROUP file correspond to Service/Section items in the Custom Order View window of the CareVue Orders tab. After completing these steps, the newly defined display group is available in the Service/Section items in the Custom Order View.

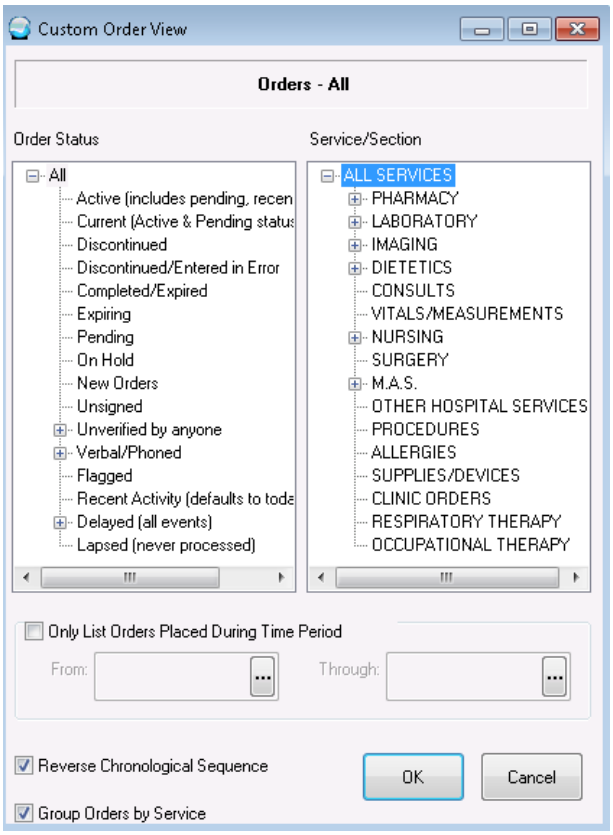

Figure 7: Custom Order View window with OCCUPATIONAL THERAPY option

This additional Display Group, once defined, also adheres to the status selections on the left of the Custom Order View window.

- **Identify orderable items by editing** the OTHER DISPLAY GROUP field in the ORDERABLE ITEMS file for each orderable you want to display in the newly created Display Group.

  Note: The Service column designation does not change for these orders, e.g., a medication order will still show Inpt. Med in the Service column of the Orders tab.

- **If desired, add additional criteria** for the Custom Order View window to further filter the newly created display group. This additional filter is most often used when creating a display group for Respiratory Therapy, e.g., to define specific medication routes like INHALATION used by respiratory therapists. The medication route is entered in a new MSC ORDER CUSTOM VIEW file in the RESPIRATORY THERAPY display group.

  This file limits the medication orders displayed to only those with a medication route defined in the MSC ORDER CUSTOM VIEW file. In the example below, only medication orders with an orderable item configured as Respiratory Therapy AND the medication route INHALATION display in the new Custom Orders View in CareVue.

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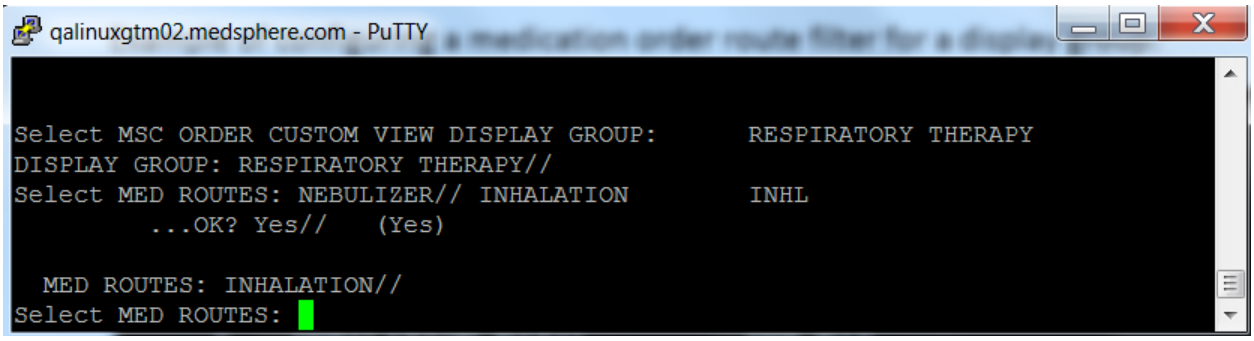

Figure 8: Configuring a medication order route filter for a display group

- **Optional:** Update the CareVue verification column in the Orders tab to reflect your preferred terminology for the full range of users who hold the ORELSE security key and who Verify and Chart Check orders. Use the BEHOOR ORDER HEADERS parameter to select different terminology for the header of the Nurse column in the Orders tab, which verifies orders and includes the initial of the responsible user. Edit the column header in the BEHOOR ORDER HEADERS parameter.

```
--------- Setting BEHOOR ORDER HEADERS  for Package: BEH COMPONENTS ---------
Select Sequence: ?


Sequence  Value
--------  -----
1         0~Blank~1
2         1~Event~1
3         2~Service~1
4         3~Order~1
5         4~Start/Stop~1
6         5~Provider~1
7         6~Nurse~1
8         7~Clerk~1
9         8~Chart~1
10        9~Status~1
11        10~Location~1
```

Figure 9: BEHOOR ORDER HEADERS parameter settings.

```
Select Sequence: 7
Sequence: 7//    7
Value: Verified// 6~Verified~1
Select Sequence: ?

Sequence Value
-------- -----
1        0~~1
2        1~Event~1
3        2~Service~1
4        3~Order~1
5        4~Start/Stop~1
6        5~Provider~1
7        6~Verified~1
```

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```
8       7~Clerk~1
9       8~Chart~1
10      9~Status~1
11      10~Location~1
```

Note that both tildes (~) are required. In this case, sequence 7 was changed from 6~Nurse~1 to 6~Verified~1 to replace the Nurse column header with Verified in the CareVue Orders tab.

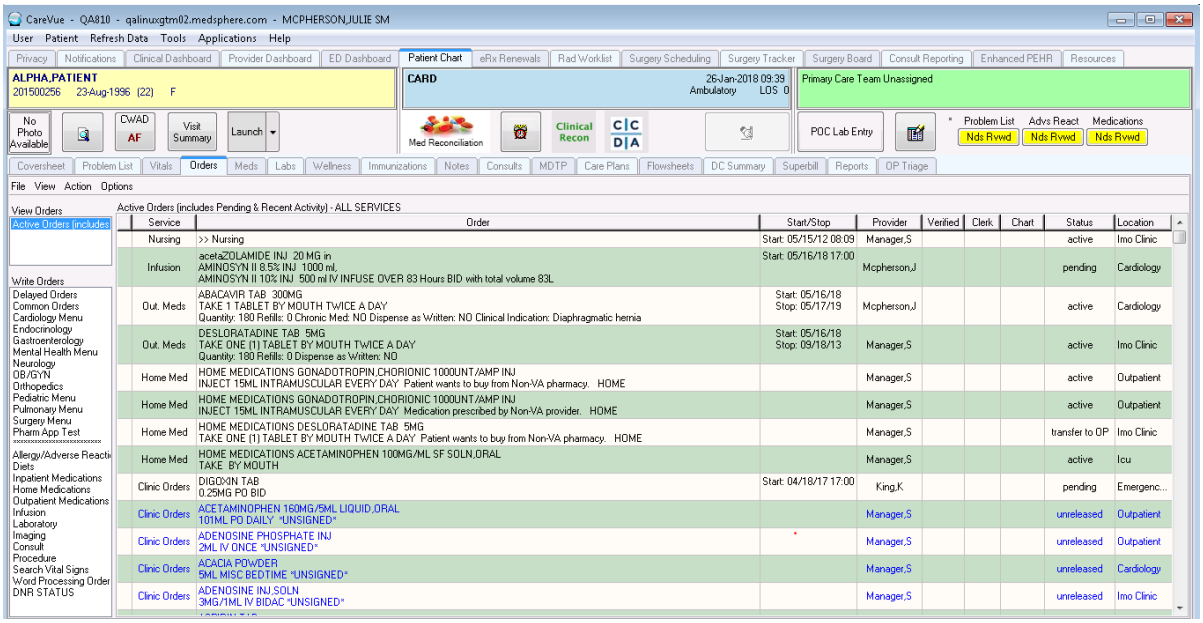

Figure 10: View Orders in CareVue Orders tab

Required action: Test in your normal orders workflow.

Related artifact: 21996

Reporting

MU EP Summary of Care Monitor Report parameter incorporates referral notes

A new MSCR REFERRAL NOTE TITLES parameter allows multiple reporting values.

When running the Meaningful Use EP/EC Summary of Care Monitor report, if an outpatient visit has any note attached with one of the titles listed in MSCR REFERRAL NOTE TITLES parameter, the visit counts as the denominator.

The numerator is all visits included in the denominator that also have a summary of care sent. Any SoC sent for the visit puts the patient in the numerator; any CCDA sent counts as the numerator.

Required action: Test in your normal Meaningful Use EP/EC reports workflow.

Related artifact: 21629

MU CQM - Create new XPAR named MSC QRDA CMS PROGRAM NAME

A new MSC QRDA CMS PROGRAM NAME parameter facilitates CMS program reporting.

When running the CQM QRDA file creation process, set the MSC QRDA CMS PROGRAM NAME parameter to the appropriate CMS program submission name, e.g., set to HQR_EHR if submitting for the EHR program only or set to HQR_EHR_IQR for both the EHR and Inpatient Quality Reporting (IQR) programs.

Required action: Test in your normal CQM QRDA file creation process.

Related artifact: 21636

CareVue includes new reporting enhancements

Release 2018.1.0 includes enhancements in support of reporting to the Hospital Inpatient Quality Reporting Program (IQR).

- Updates to eCQM value sets for the 2018 reporting year
- 2018 eCQM reporting for EH and EP
- MU CQM - Update QRDA Cat 1 format to support release 4

A new entry has been added to CQM menu of the MSCRU MAIN MENU. See the *System Design Block – CQM Reporting* for details about how to generate QRDA Category I files for the 2018 reporting year.

Related artifacts: 20954, 21673, 21671

Enhancements to the ADM/BCMA Dispense report

Enhancements of the ADM/BCMA Dispense report include the following features:

- User ability to filter by user name or ward
- An added page break to allow for printing on 8.5 x 11 paper
- Display of the user name sent in the HL7 message for all ADM dispenses
- Display of BCMA administrations completed using the CPRS button

```
CHOOSE 1-5: 2  MSC ADM BCMA REPORT     ADM & BCMA REPORT
Start Date: t-30  (MAY 20, 2018)
End Date: TODAY//  (JUN 19, 2018)
Select Patient(s) or Return for all Patients
Select PATIENT NAME:
Select Drug Class(es) or Return for ALL classes
Select VA GENERIC NAME:
Select Drug Schedule (1-5) or Return for not part of sort:
Select Patient Ward(s) or Return for All Wards
Select WARD LOCATION NAME: ??

   Choose from:
   ED
   ICU
   MAIN SURGERY MINOR PROCEDURE
   MED/SURG
   MED/SURG-DEMO
   PSYCH

Select WARD LOCATION NAME: icu
Select WARD LOCATION NAME: med/surg
     1   MED/SURG
     2   MED/SURG-DEMO
CHOOSE 1-2: 1  MED/SURG
Select WARD LOCATION NAME:
Select User(s) to include or Return for All Users
Select NEW PERSON NAME:
Limit display to Orders where dispense does not match administered? NO//
DEVICE: HOME//
```


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Figure 11: ADM/BCMA Report

Required action: Test in your normal ADM/BCMA report printing process.

Related artifact: 21801

New Vital Signs Measurements Reports

With this release, CareVue includes two new vital sign measurement PuTTY reports: MSC VITAL SIGNS REPORT PT and MSC VITAL SIGNS REPORT VISIT. MSC VITAL SIGNS REPORT PT returns inpatient vital signs data for a specific patient within a chosen date range; MSC VITAL SIGNS REPORT VISIT returns inpatient vital signs data for a specific patient and visit.

Both reports display in the same row/column format. Rows indicate a vital sign entry and columns display the date and time taken, the vital type, a value, any qualifiers, who entered the vital and when, whether it was marked entered in error, and the reason it was entered in error. Both reports may be printed to associated devices.

```
Select Systems Manager Menu QA810(GTM02) Option: test an option not in your menu
Option entry to test: MSC VITAL SIGNS REPORT
     1   MSC VITAL SIGNS REPORT PT       Vital Signs Report for Patient
     2   MSC VITAL SIGNS REPORT VISIT       Vital Signs Report for Visit
CHOOSE 1-2:
```

Figure 12: Two new vital signs measurements reports

MSC VITAL SIGNS REPORT PT

Report Pathway: Log in to PuTTY > Test an option not in your menu > Option entry to test: MSC VITAL SIGNS REPORT PT > Select Patient > Enter starting date > Enter ending date > Enter Device

```
Option entry to test: MSC VITAL SIGNS REPORT
     1   MSC VITAL SIGNS REPORT PT       Vital Signs Report for Patient
     2   MSC VITAL SIGNS REPORT VISIT       Vital Signs Report for Visit
CHOOSE 1-2: 1  MSC VITAL SIGNS REPORT PT     Vital Signs Report for Patient
Select PATIENT: OHDE,REPORTSIX
   1   OHDE,REPORTSIX A      7-1-45    7-1-45  1000000405  110-1 Male
   2   OHDE,REPORTSIXTEEN J      5-12-89    5-12-89  1000000416   Female
CHOOSE 1-2: 1  OHDE,REPORTSIX A      7-1-45    7-1-45  1000000405  110-1 Male
Enter starting date:  6/1/18  (JUN 01, 2018)
Enter ending date: T  (SEP 07, 2018)
DEVICE: HOME//   TELNET
Sep 07, 2018                                                  PAGE 1

Vital Signs Report for Patient OHDE,REPORTSIX A
Selected Date Range : 6/1/18 to 9/7/18@24:00

TIME TAKEN     VITAL TYPE     VALUE    QUAL ENTERED BY ENTERED DT    EIE RSN
-------------------------------------------------------------------------------
7/11/18@08:00  TEMPERATURE    98.6          OHDE,ROCHE 7/11/18@12:33
7/11/18@10:00  TEMPERATURE    99.8          OHDE,ROCHE 7/11/18@12:43  Y INVALID
7/11/18@10:00  TEMPERATURE    99.5          OHDE,ROCHE 7/11/18@12:45  Y INVALID
7/11/18@10:00  TEMPERATURE    99.5          OHDE,ROCHE 7/11/18@13:05
7/16/18@20:00  TEMPERATURE    99            OHDE,ROCHE 7/17/18@08:24  Y INVALID
7/16/18@20:00  TEMPERATURE    100           OHDE,ROCHE 7/17/18@08:25
```

Figure 13: MSC VITAL SIGNS REPORT PT

MSC VITAL SIGNS REPORT VISIT

Report Pathway: Log in to PuTTY > Test an option not in your menu > Option entry to test: MSC VITAL SIGNS REPORT VISIT > Select Visit/Admit Date & Time, Patient Name, Visit ID, or HL7 Visit Number > (Recommend selecting either Visit/Admit Date & Time or Patient Name)

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If Patient Name was selected > Select Visit > Enter Device

If Visit/Admit Date & Time was selected > Select Patient > Enter Device

```
Select VISIT: OHDE,REPORTSIX   OHDE,REPORTSIX A      7-1-45
                               7-1-45    1000000405  110-1 Male
     1   OHDE,REPORTSIX A  JUN 21,2018@09:23     OHDE,REPORTSIX A     ICU     16
34-TEST
     2   OHDE,REPORTSIX A  JUN 21,2018@09:23     OHDE,REPORTSIX A     ICU     16
90-TEST
CHOOSE 1-2: 1  JUN 21,2018@09:23     OHDE,REPORTSIX A     ICU     1634-TEST
DEVICE: HOME//   TELNET
Sep 07, 2018                                                  PAGE 1

Vital Signs Report for Patient OHDE,REPORTSIX A
Selected Date Range : 6/21/18@09:23 to 9/7/18@13:01:40

TIME TAKEN     VITAL TYPE     VALUE    QUAL ENTERED BY ENTERED DT    EIE RSN
-------------------------------------------------------------------------------
7/11/18@08:00  TEMPERATURE    98.6          OHDE,ROCHE 7/11/18@12:33
7/11/18@10:00  TEMPERATURE    99.8          OHDE,ROCHE 7/11/18@12:43  Y INVALID
7/11/18@10:00  TEMPERATURE    99.5          OHDE,ROCHE 7/11/18@12:45  Y INVALID
7/11/18@10:00  TEMPERATURE    99.5          OHDE,ROCHE 7/11/18@13:05
7/16/18@20:00  TEMPERATURE    99            OHDE,ROCHE 7/17/18@08:24  Y INVALID
7/16/18@20:00  TEMPERATURE    100           OHDE,ROCHE 7/17/18@08:25
```

Figure 14: MSC VITAL SIGNS REPORT VISIT

Required action: Test in your normal vital signs entry workflow. For users with PuTTY access, test new MSC vital signs reports.

Related artifact: 22177

CareVue adds new MSCR Patient I/O Report

With this release, a new MSCR Patient I/O Report is included in PuTTY. The report is added to the Clinical System Analyst Menu (MSC CSA).This report is patient- and date-range specific and contains four sections:

- **Intake**: This section displays intake date/time, type, subtype, total volume, entered by, location, order number, IV Fluid/medication name and any notes entered.
- **Output**: Use this list to view output date/time, type, subtype, amount, entered by, location and any notes entered.
- **IV Site Assessment:** This section lists the IV site and assessments for that site in chronological order, including these details: the IV site assessment date/time, site description, tubing change, dressing change, entered by and any notes entered.
- **IV Maintenance**: Use this section to view the IV start date/time, infusion site, solution, type of IV, volume, IV catheter type and size, IV started by, location, infusion rate, order number, dose, dose rate, infuse over and any notes entered. Additional actions taken on the IV bag are captured as separate entries in the IV Maintenance section.

Note: Not all fields are required during documentation. Return of data in non-required fields depends on user entry. Users can print this report to associated devices.

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To view the report:

1. Log in to PuTTY
2. Select the Clinical System Analyst Menu (MSC CSA menu)
3. Select I/O for the Patient I/O Report.

```
  AM      Alert Management ...
  ART     Adverse Reaction Tracking ...
  ARTC    Adverse Reaction Tracking Clinician Menu ...
  CM      Consult Management ...
  CPRS    CPRS Configuration (Clin Coord) ...
  DASH    Patient Dashboard Management ...
  DD      Document Definitions (Manager) ...
  FM      VA FileMan ...
  GP      General Parameter Tools ...
  HS      Health Summary Overall Menu ...
  I/O     PATIENT I&O REPORT
  MDTP    MDTP Management ...
  MIS     Text Integration Utilities (MIS Manager) ...
  MM      Menu Management ...
  RM      Reminder Managers Menu ...
  RT      Respiratory Therapy Orders Form Report (manual)
  SECL    SECLUSION/RESTRAINT Management Menu ...
  TEST    Test an option not in your menu
  TIU     TIU Maintenance Menu ...
  UM      User Management ...
```

Figure 15: Clinical System Analyst Menu (MSC CSA)

4. Select the Patient
5. Enter start date & time
6. Enter stop date & time
7. Enter the print device. Accept the default of “HOME” at device if you want to print to screen.

```
CHOOSE 1-5: 1  MUNDI,CHARLOTTE      7-5-33    7-5-33  1000000122   Female
Enter START date/time:  T-1@8A  (OCT 30, 2018@08:00:00)
Enter END date/time:  NOW  (OCT 31, 2018@11:36:18)


DEVICE: HOME//
```

Figure 16: Entering print parameters for patient

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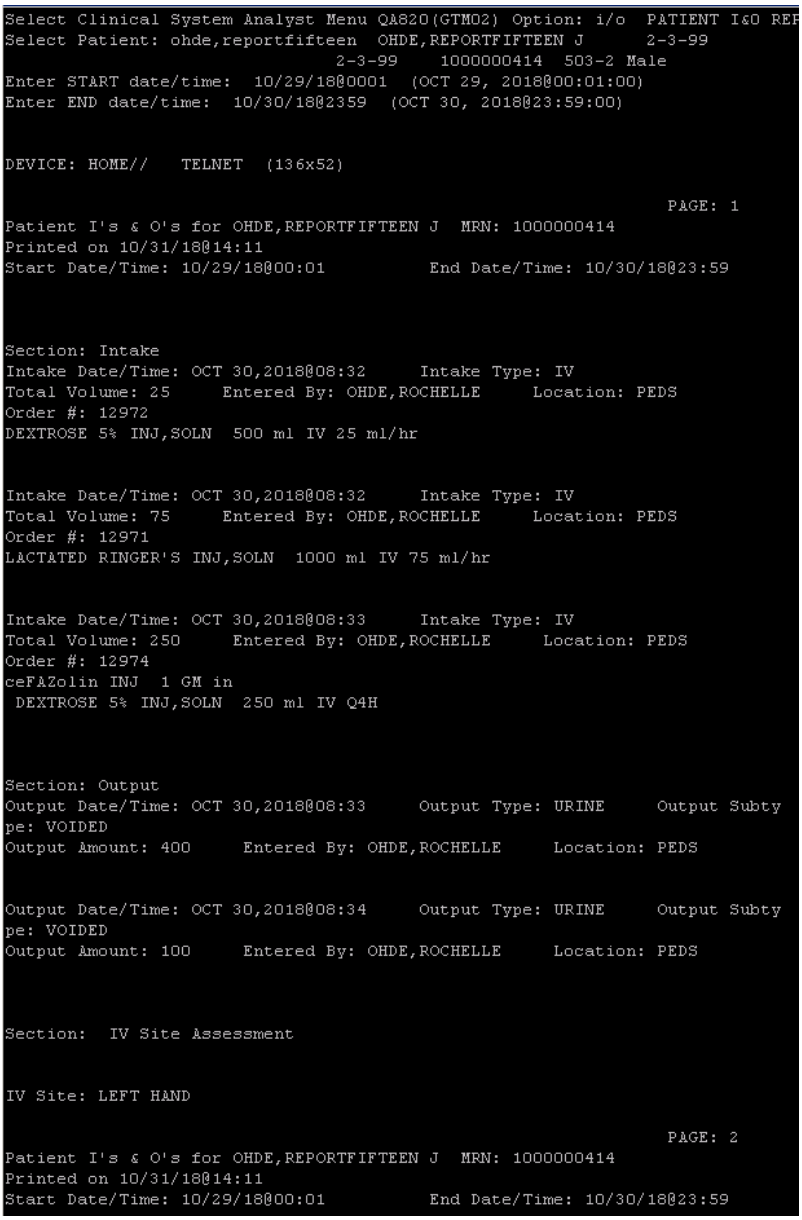

```
Select Clinical System Analyst Menu QA820(GTM02) Option: i/o  PATIENT I&O REP
Select Patient: ohde,reportfifteen  OHDE,REPORTFIFTEEN J      2-3-99
                              2-3-99    1000000414  503-2 Male
Enter START date/time:  10/29/18@0001  (OCT 29, 2018@00:01:00)
Enter END date/time:  10/30/18@2359  (OCT 30, 2018@23:59:00)


DEVICE: HOME//   TELNET  (136x52)

                                                                PAGE: 1
Patient I's & O's for OHDE,REPORTFIFTEEN J  MRN: 1000000414
Printed on 10/31/18@14:11
Start Date/Time: 10/29/18@00:01          End Date/Time: 10/30/18@23:59



Section: Intake
Intake Date/Time: OCT 30,2018@08:32     Intake Type: IV
Total Volume: 25     Entered By: OHDE,ROCHELLE     Location: PEDS
Order #: 12972
DEXTROSE 5% INJ,SOLN  500 ml IV 25 ml/hr


Intake Date/Time: OCT 30,2018@08:32     Intake Type: IV
Total Volume: 75     Entered By: OHDE,ROCHELLE     Location: PEDS
Order #: 12971
LACTATED RINGER'S INJ,SOLN  1000 ml IV 75 ml/hr


Intake Date/Time: OCT 30,2018@08:33     Intake Type: IV
Total Volume: 250     Entered By: OHDE,ROCHELLE     Location: PEDS
Order #: 12974
ceFAZolin INJ  1 GM in
 DEXTROSE 5% INJ,SOLN  250 ml IV Q4H



Section: Output
Output Date/Time: OCT 30,2018@08:33     Output Type: URINE     Output Subty
pe: VOIDED
Output Amount: 400     Entered By: OHDE,ROCHELLE     Location: PEDS


Output Date/Time: OCT 30,2018@08:34     Output Type: URINE     Output Subty
pe: VOIDED
Output Amount: 100     Entered By: OHDE,ROCHELLE     Location: PEDS



Section:  IV Site Assessment


IV Site: LEFT HAND

                                                                PAGE: 2
Patient I's & O's for OHDE,REPORTFIFTEEN J  MRN: 1000000414
Printed on 10/31/18@14:11
Start Date/Time: 10/29/18@00:01          End Date/Time: 10/30/18@23:59
```

Figure 17: MSCR Patient I/O Report

Required action: Test in your normal Intake, Output, and IV Maintenance/Rate/Site Assessment workflow. For users with PuTTY access, test by running the new MSCR Patient I/O Report.

Related artifact: 22316

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General Flowsheets Enhancements

Note: General Flowsheets enhancements are applicable to all areas except Seclusion Restraints.

Ability to edit previous comments

The Comments field in the Flowsheets entry dialog is renamed Notes. Users can now edit entries made in the Flowsheets Notes field.

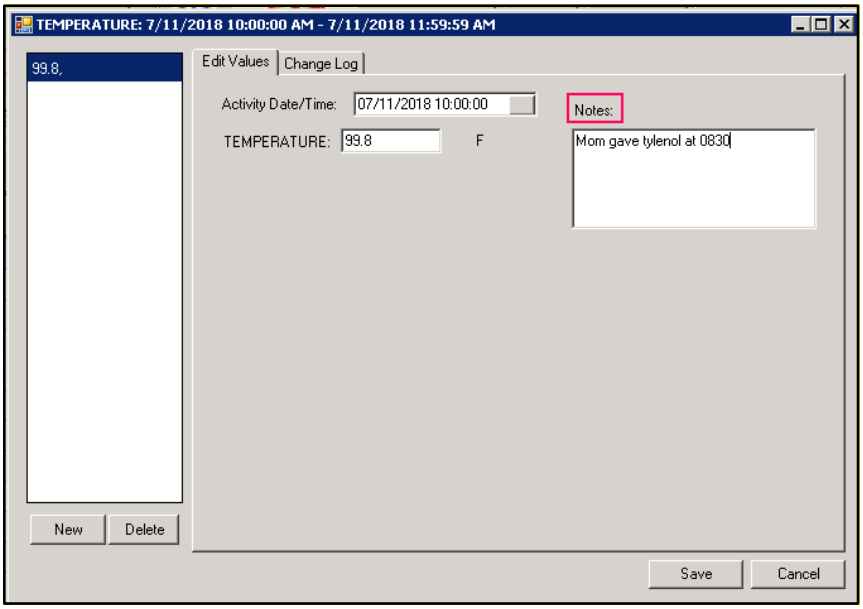

Figure 18: New Notes field in the Flowsheets Edit Values tab

To alter a comment, right click on the entry and select Enter/Edit Readings. (Previously entered, editable, comments display in the Notes field.) An entry in a new Reason for Edit Comments field is required prior to saving the edit.

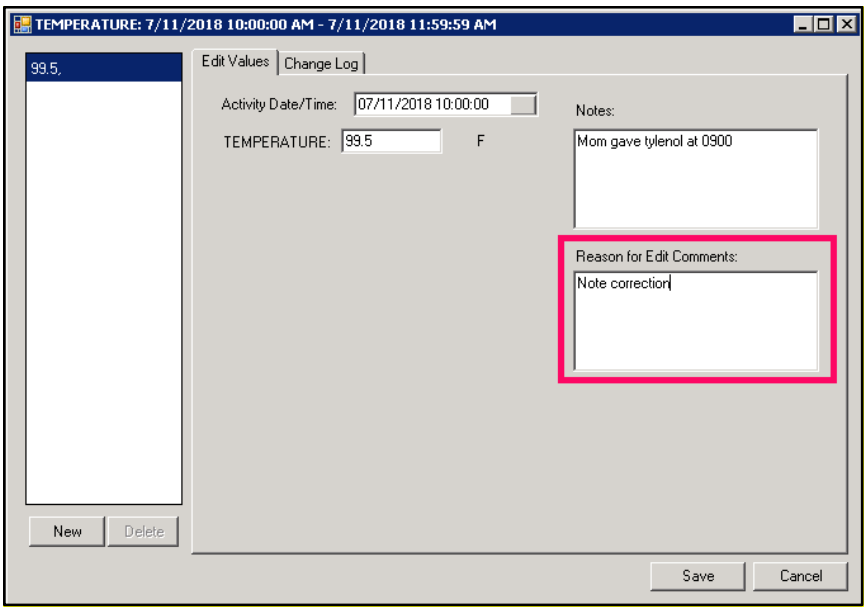

Figure 19: The required Reason for Edit Comments field

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Only the user who made the initial entry can edit it. If another user selects Enter/Edit Readings, the user sees the information but fields are grayed out and cannot be edited.

Edits are captured in the Change Log, which now includes new Notes and Reason for Edit Comments columns.

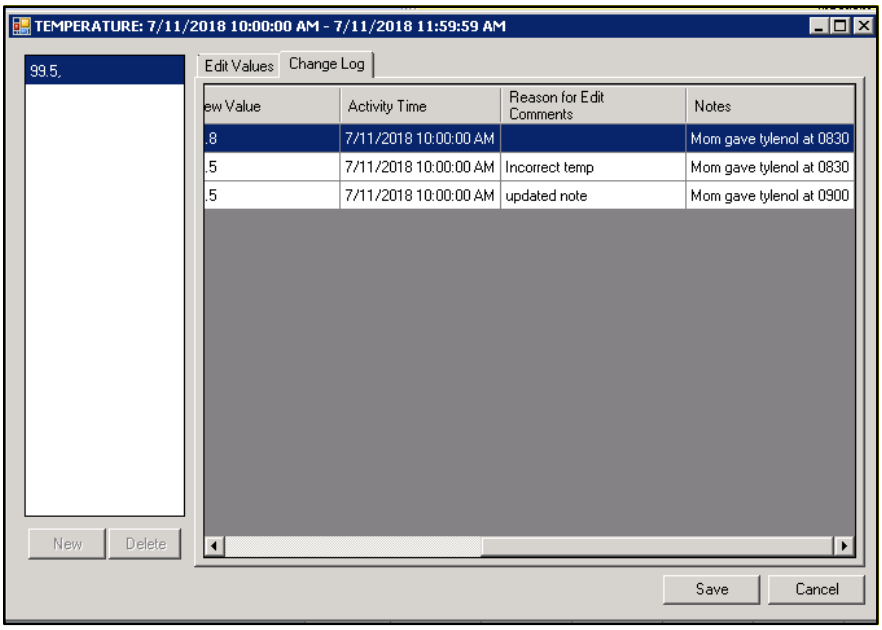

Figure 20: The Change Log tab with new columns

The Note and the Reason for Edit Comments information also displays in the hover-over feature on the main Flowsheets view.

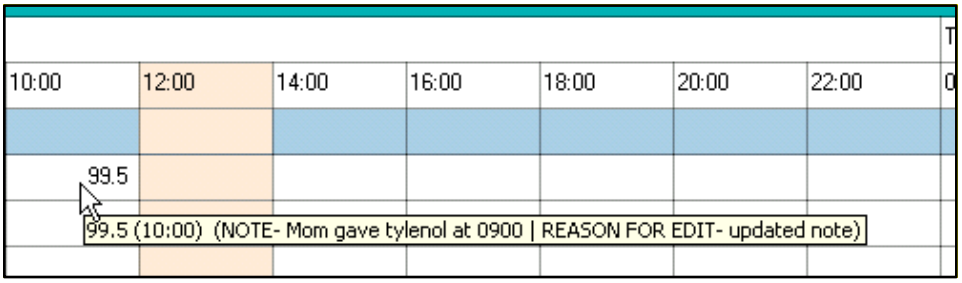

Figure 21: Hover-over information in the Flowsheets primary view

Required action: Test in your normal Flowsheets workflow.

Suggested additional testing: Test by entering a value in Flowsheets and a comment in the Notes field, then click Save. Right click on the entry and select Enter/Edit Readings. Update the comment, enter a Reason for Edit Comments explanation and click Save. Right click on the entry again and access the Change Log tab. Note both the previous entry and updated entry are displayed in the Change Log. Hover over the entry on the main Flowsheets display to view the information.

Related artifact: 21623

Mark Entered in Error indicator added to Flowsheets

A red triangle indicator added to the upper left corners of the Flowsheets time cells for the Vital Signs, Intake, and Output rows now indicates to users that an entry has been entered in error.

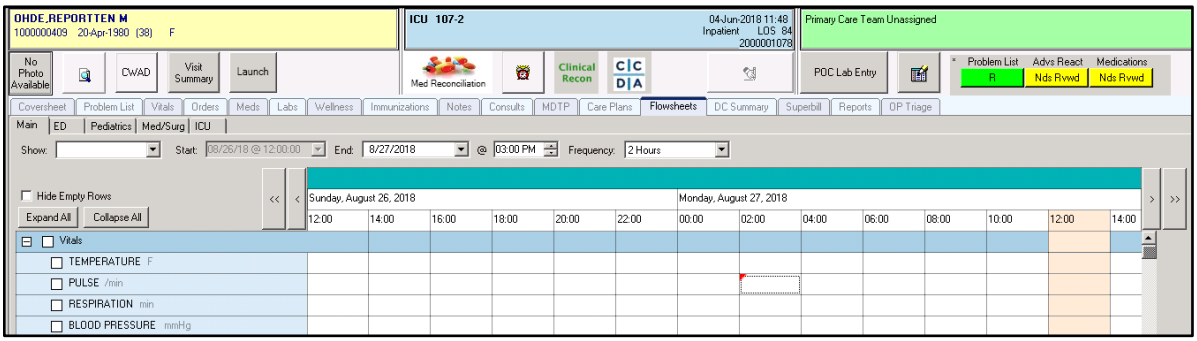

Figure 22: Entered in error indicator

Hover over a cell with a red triangle to display a Marked Entered in Error message, the entry data that was removed, the entry time, and the reason for the error.

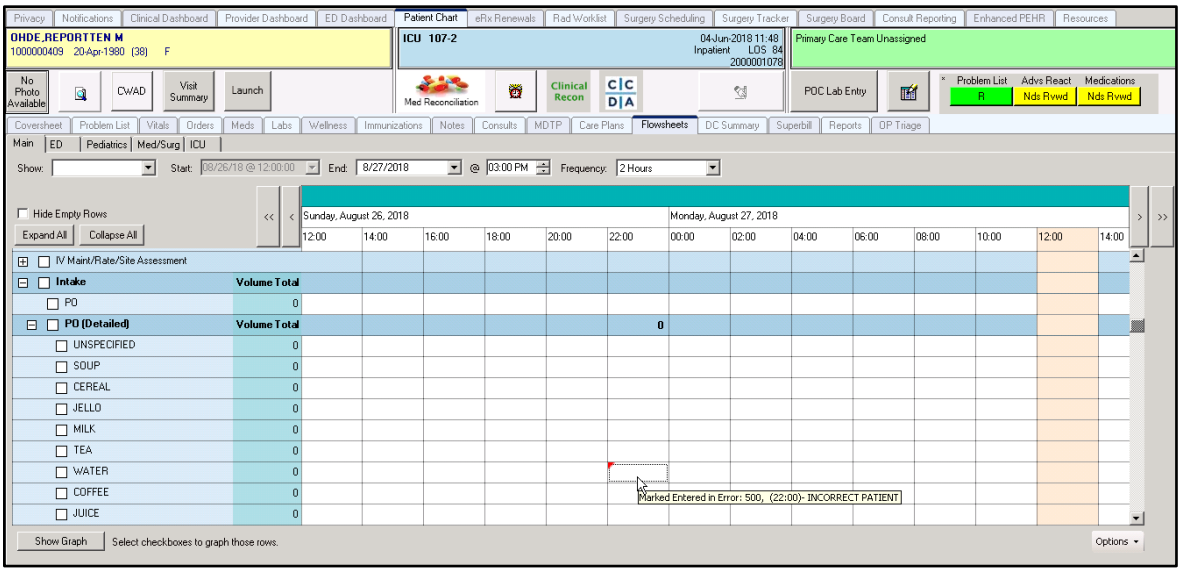

Figure 23: Entered in Error hover-over message

A data entry in a cell with a Marked Entered in Error triangle displays both the new data and the triangle. The most recent entry appears first in the hover over, then the Marked Entered in Error entry.

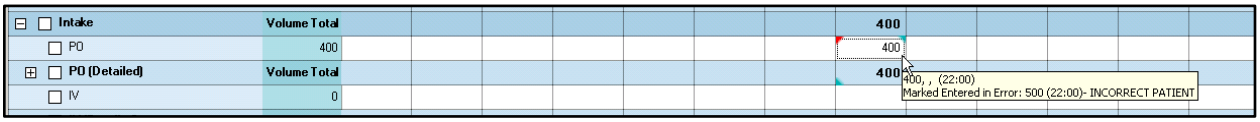

Figure 24: New entry with Marked Entered in Error hover-over

Any edited vital sign cell displays the red triangle in the upper left corner to indicate either an edit or a Marked Entered in Error value.

Every Marked Entered in Error entry is recorded in the Change Log. The phrase Marked Entered in Error and the reason for the error display in the Reason for Edit Comments column.

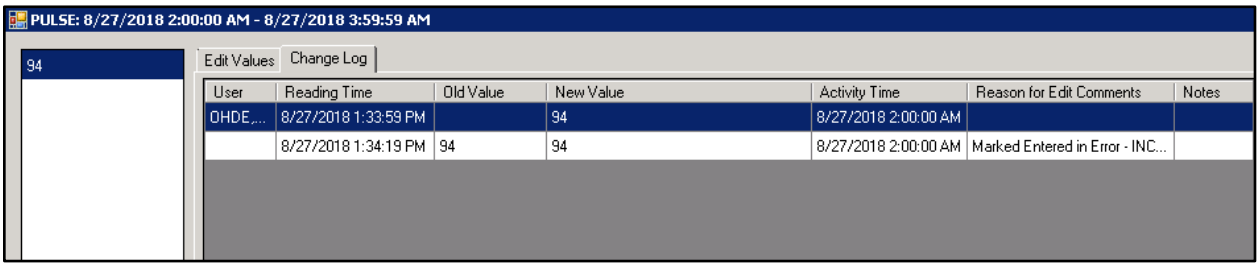

Figure 25: An error recorded in the Change Log

Required action: Test in your normal Flowsheets workflow.

Related artifact: 21968

IV Flowsheets Enhancements

Flowsheets IV rate and fluid volume improvements

Several enhancements made to Flowsheets assist with IV rate and fluid volume documentation.

IV Maint/Rate/Site Assessment

The IV Maintenance section is renamed IV Maint/Rate/Site Assessment and now displays above the Intake and Output sections. This is visit specific and allows for IV fluids/medications to be associated to IV sites; it also enables IV rate and IV site assessment documentation.

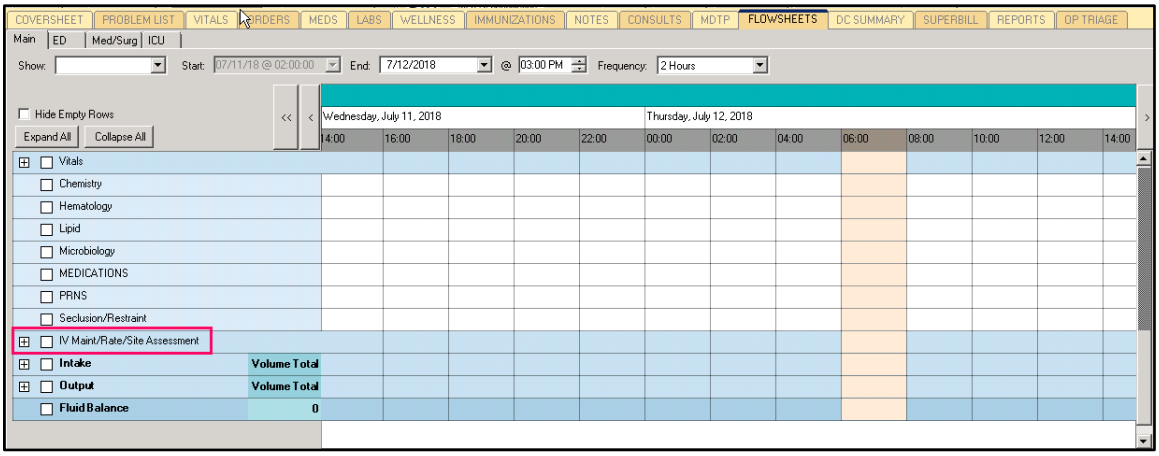

Figure 26: IV Maint/Rate/Site Assessment

New Rate, Dose and Infuse Over fields, as well as a Dose Rate drop-down menu, are added to the IV Maint/Rate/Site Assessment dialog. The IV Order dropdown contains active and pending IV fluids and/or medications that are not already associated with an IV site.

The dropdown displays the following:

- Any active/pending IV fluid/medication order never associated with a site
- Any active/pending IV fluid/medication order that was associated with a site but was later marked Entered in Error
- Any active/pending IV fluid/medication order that was associated with a site but was later DC'd in Flowsheets

The Comments field is renamed Notes. The IV Site Assessment section is changed from a drop-down to checkboxes to allow for multiple selections.

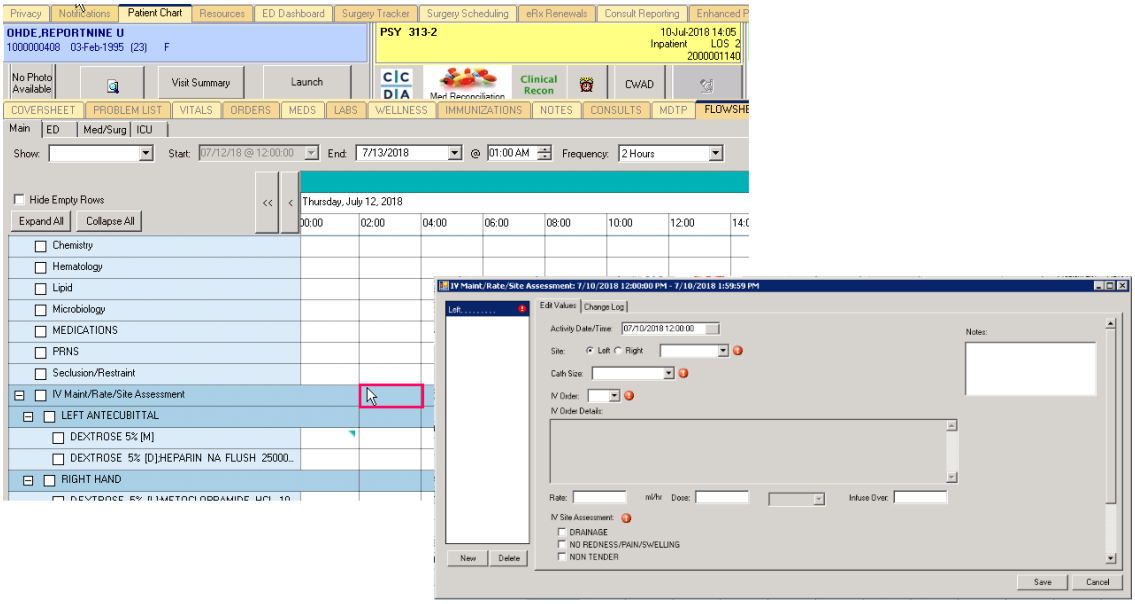

Figure 27: IV Maint/Rate/Site Assessment dialog

The Dose Rate drop-down includes a default list of dose rate options. Sites can edit this list in the MSC FLOWSHEETS UNITS file.

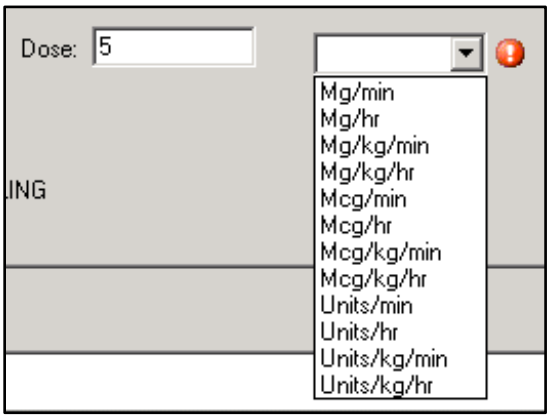

Figure 28: Dose field and Dose Rate drop down

The IV Site Assessment dialog is updated to checkbox format to allow for multiple selections. The Comments field is renamed Notes. If the Tubing Changed and/or Dressing Changed options are marked Yes, that information displays in the hover-over display.

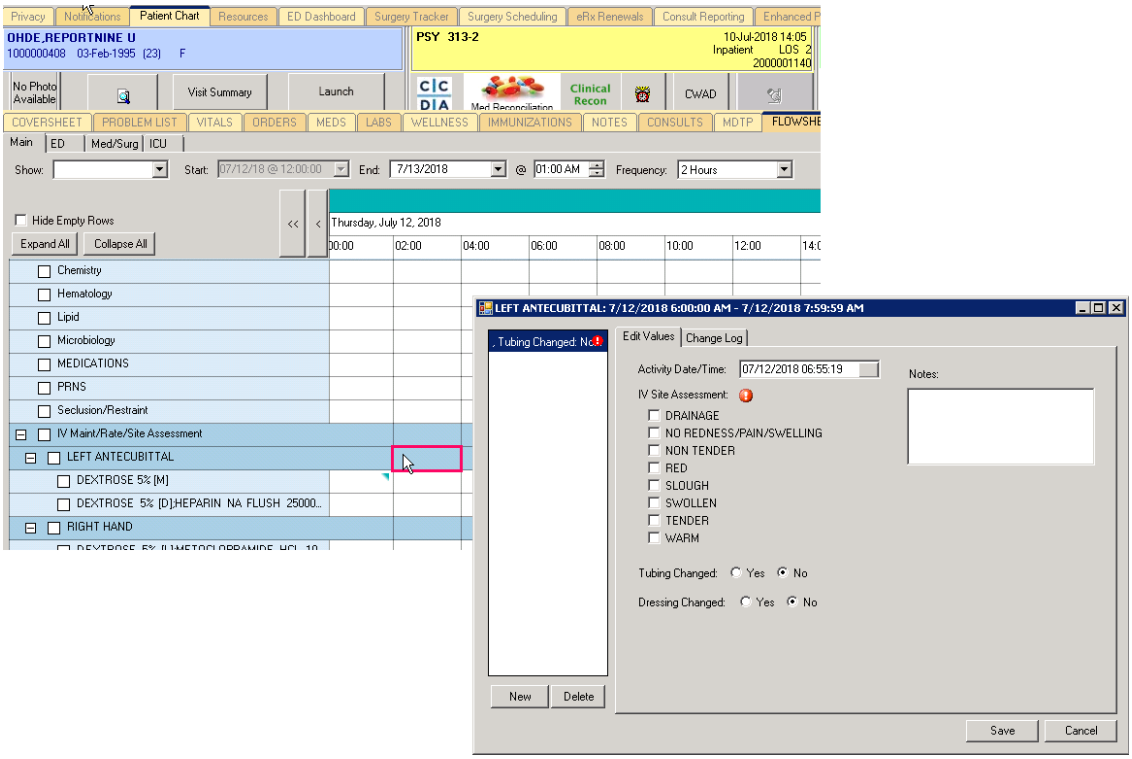

Figure 29: IV Site Assessment dialog

An Action field added to the IV Infusion dialog enables documentation of common IV interventions or monitoring terms, e.g., Rate Change or Bag Infusing. Users can select more than one action at a time. Administrators can customize options in the Action field using the ACTIVITY LOG REASON file. Rate, Dose, Dose Rate, and Infuse Over fields are new, and the Comments column is renamed Notes. The Amount(ml) field is removed. Users can document volume in the new IV Intake section of Flowsheets (see IV Intake section of release notes). The Dc'd field is removed from the dialog. This now displays in the Change Log after the user documents that the infusion is Dc'd.

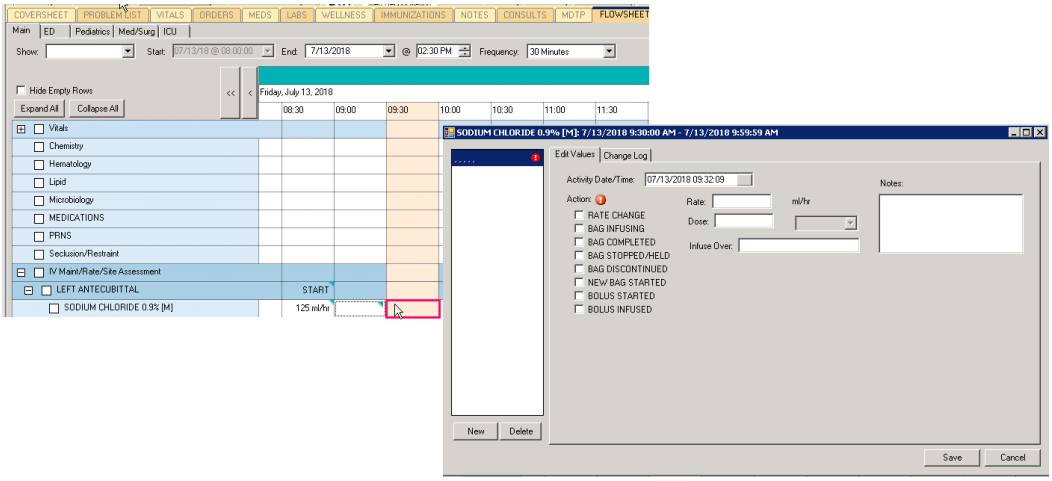

Figure 30: IV/Medication Infusion dialog

On the main Flowsheets display, the IV rate displays in the time cell. All additional documentation displays in the cell hover-over feature. If additional documentation but no rate is entered, the cell has a

blue triangle as an indicator in the upper right-hand corner. If multiple rates are documented in the same time cell, the most recent rate appears first in the hover-over information.

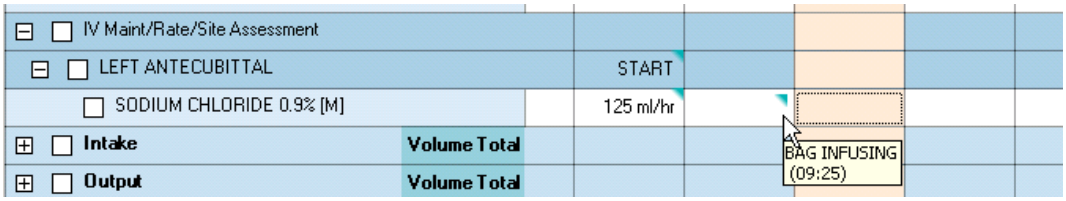

Figure 31: Hover-over and additional documentation indicator

The Amount (ml)/Volume Given (ml) field from the D/C fluid option is removed. Intake volume is now documented in the new IV Intake section on Flowsheets (see IV Intake section of release notes).

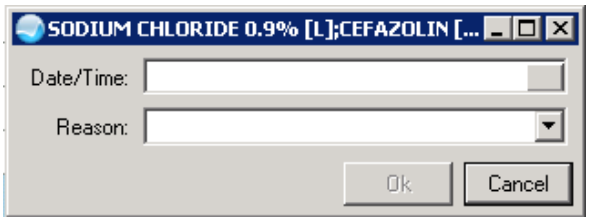

Figure 32: D/C Fluid dialog

The terminology on the Convert to Heplock button is changed to Convert to IV Lock on the DC Site dialog.

Figure 33: D/C Site dialog

Marking IV fluids/medications as Entered in Error

A Mark Entered In Error feature is available in the IV Maint/Rate/Site Assessment section of Flowsheets.

IV site assessment row Mark Entered In Error

Right click on the IV site row and select the Mark Entered In Error option.

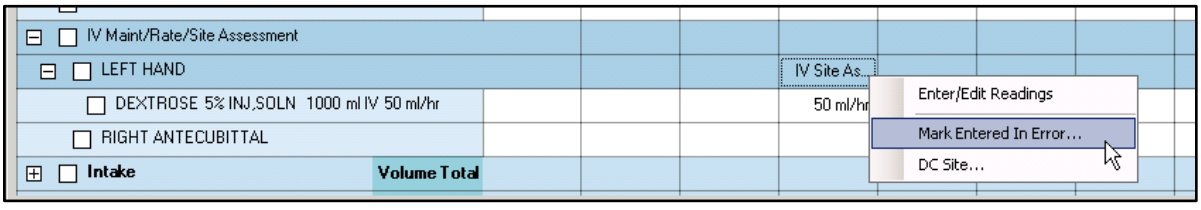

Figure 34: IV site row Mark Entered in Error option

The Mark Entered In Error Select Reason dialog drop-down displays four options: Incorrect Date/Time, Incorrect Reading, Incorrect Patient, Invalid Record.

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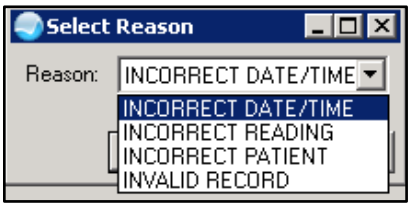

Figure 35: Select Reason drop-down options

Click OK to remove the entry from the Flowsheet cell. A red triangle displays in the upper left corner of the fluid row cell to indicate a Mark Entered In Error message. Hover over the cell to display the entry that was Marked Entered In Error.

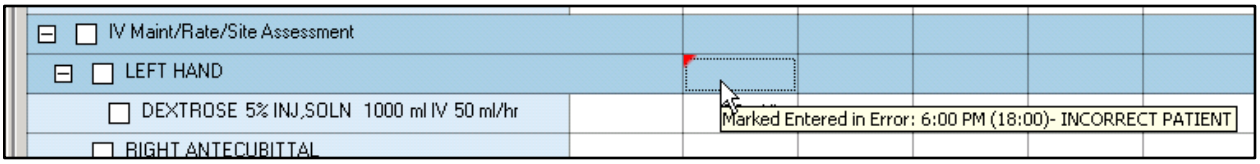

Figure 36: Mark Entered In Error indicator and hover-over information

The original entry and the note Marked Entered In Error are captured in the Change Log.

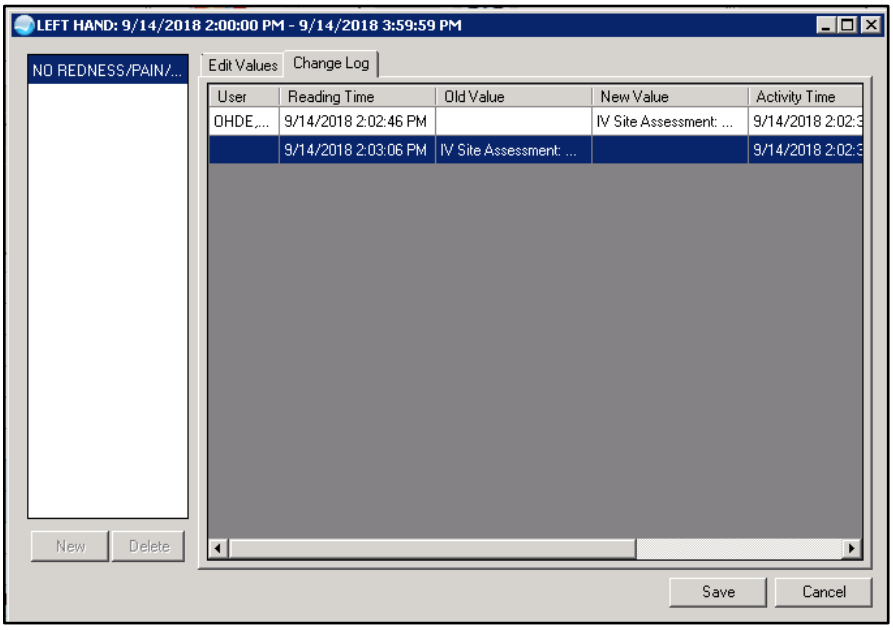

Figure 37: Change Log

IV site row entry with an IV start Mark Entered In Error

Right click on the IV site row containing an IV start and select the Mark Entered In Error option.

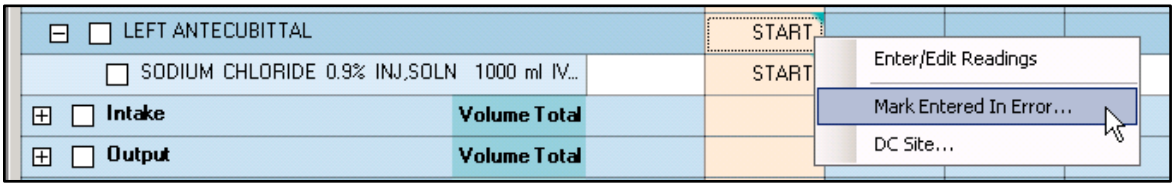

Figure 38: Mark Entered In Error option on an IV site row

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If you select Mark Entered In Error for an IV site that has a documented IV fluid or medication start, the following message displays.

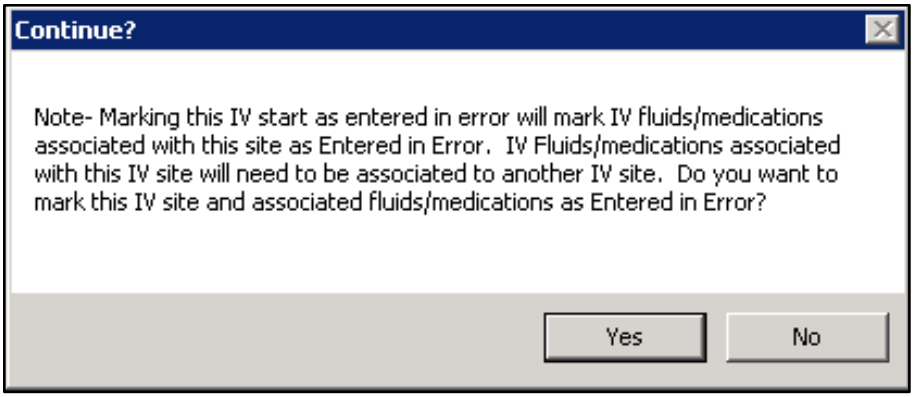

Figure 39: Continue? message for IV site Mark Entered In Error

- Click Yes to open the Mark Entered In Error Select Reason dialog and select one of the same four options: Incorrect Date/Time, Incorrect Reading, Incorrect Patient, Invalid Record.
- Click OK in the Select Reason dialog after selecting a reason and the IV site and any associated medication/fluid entries are removed from the Flowsheet cell/s.
- Choose No to close the Continue? message and return to the Flowsheets main display screen.

Any fluids or medications associated with the IV site that were Marked Entered In Error become selectable again in the IV site start dialog, enabling you to associate the fluid with another IV site.

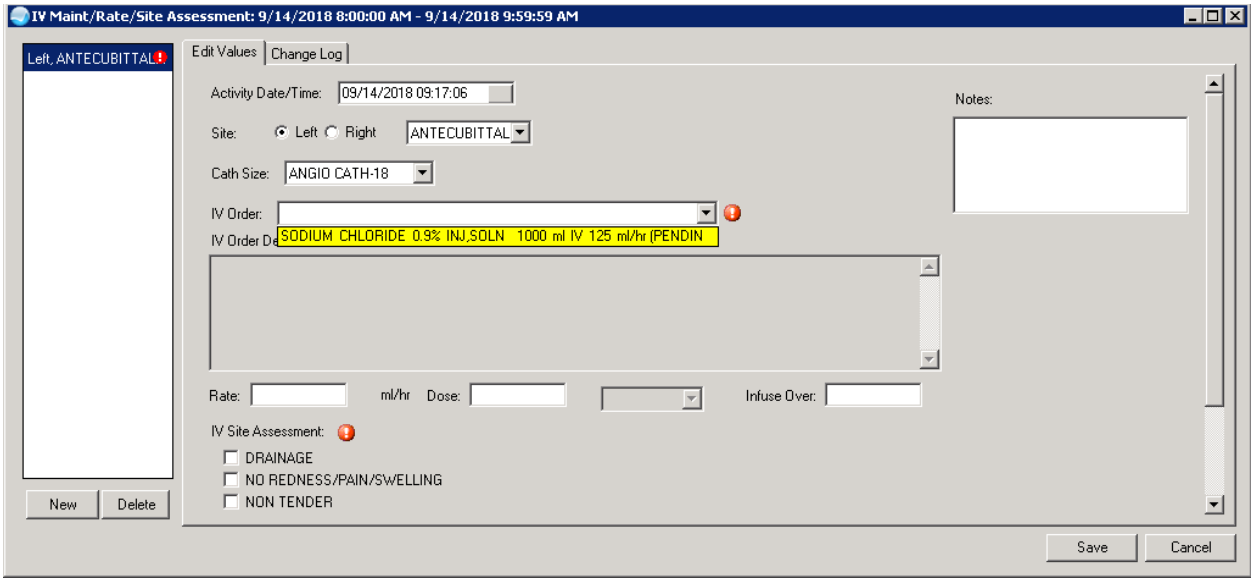

Figure 40: IV site start dialog

IV site start and IV fluid row start Mark Entered In Error

For an IV site started at the same time as the associated fluid/medication, be aware that the Mark Entered In Error feature for the IV fluid also marks the IV Site as Mark Entered In Error if it is currently the only associated IV fluid. IV site starts and fluid/medication starts with more than one fluid/medication started at the same time allow a single fluid to be Marked Entered In Error without affecting the IV site start.

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Right click on the IV fluid start and select Mark Entered In Error.

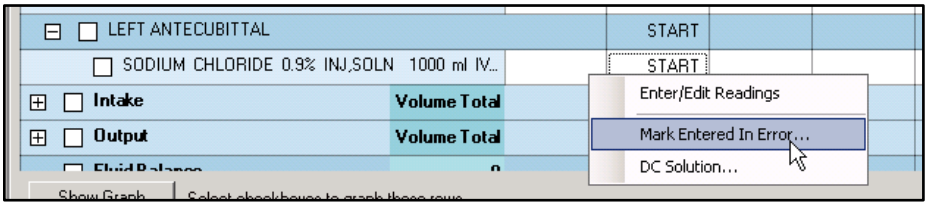

Figure 41: Mark Entered In Error option on IV fluid with no other associated fluids for the IV Site

The following message displays:

> *"Note: Marking this IV fluid as entered in error will mark the IV Site as entered in error. The IV fluid will need to be associated to another IV site. Do you want to mark the IV fluid and associated IV site as entered in error?"*

Choose Yes to open the Mark Entered In Error Select Reason dialog and select one of the four options: Incorrect Date/Time, Incorrect Reading, Incorrect Patient, Invalid Record.

Click OK in the Select Reason dialog and the IV fluid/medication and associated IV site are removed from the Flowsheet cell/s.

Choose No to close the Continue? message and return to the Flowsheets main display screen.

Fluid/Medication level row

When a message notice displays, right click on the fluid/medication level row and select the Mark Entered In Error option.

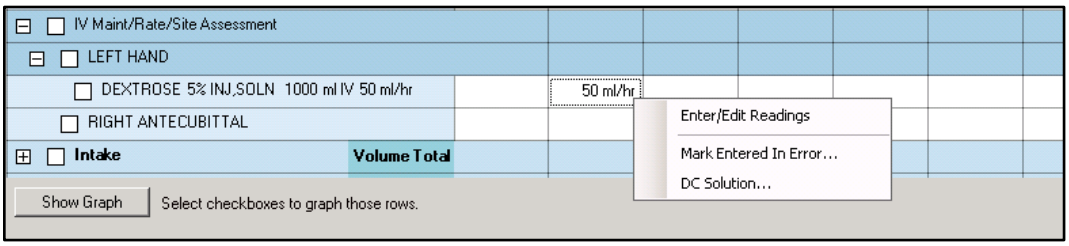

Figure 42: Fluid/Medication row Mark Entered In Error option

Choose one of the Mark Entered In Error Select Reason dialog drop-down options: Incorrect Date/Time, Incorrect Reading, Incorrect Patient, Invalid Record.

Click OK to remove the entry from the Flowsheets cell. A red triangle displays in the upper left corner of the fluid row cell to indicate a Marked Entered In Error message. Hover over the cell to display the entry that was Marked Entered In Error.

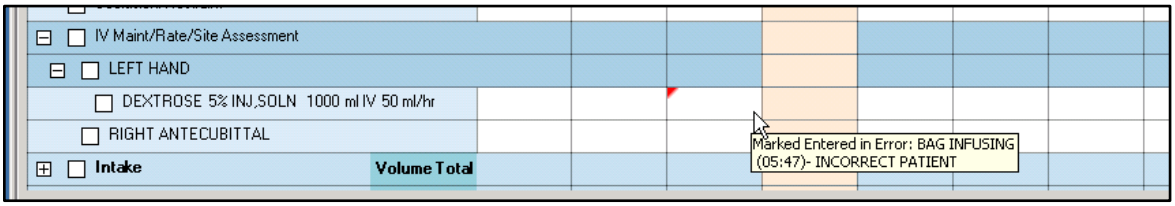

Figure 43: Mark Entered In Error indicator and hover-over

The original entry and Marked Entered In Error message are captured in the Change Log.

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Note: When an IV site and fluid/medication started together are marked Entered in Error, the fluid/medication and IV site disappear from Flowsheets and no Entered in Error indicator remains. When an IV Site assessment is marked Entered in Error, the indicator is removed after a screen refresh. These issues are known and are being addressed in a future release of Flowsheets.

Intake - IV and IV (Detailed)

Two new IV and IV (Detailed) options added under Intake in Flowsheet Profiles enable concise documentation of IV fluid/medication intake. To display in the appropriate Flowsheet(s), system administrators must add to Flowsheets Profiles. Add either IV OR IV (Detailed) to Flowsheets, but not both. When added to Flowsheets Profiles, IV and/or IV (Detailed) displays after the PO options and before Tubefeeding in the Intake section.

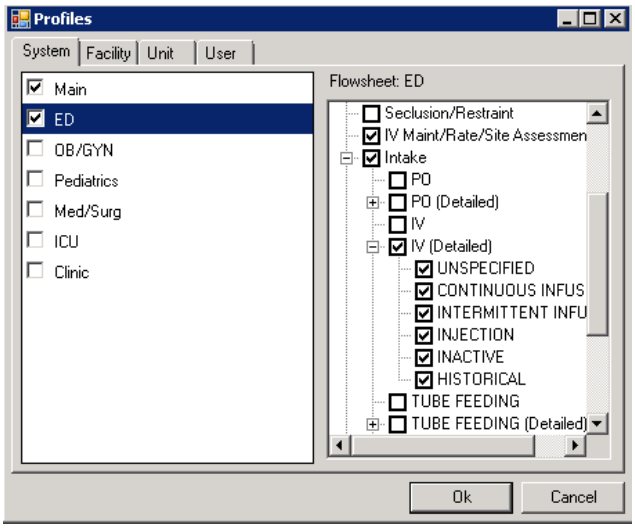

Figure 44: Flowsheets Profiles configuration

Intake - IV

The IV intake option allows fluid volume entry without additional details. The IV intake entries update the overall Intake volume total and factor into calculated Fluid Balance data.

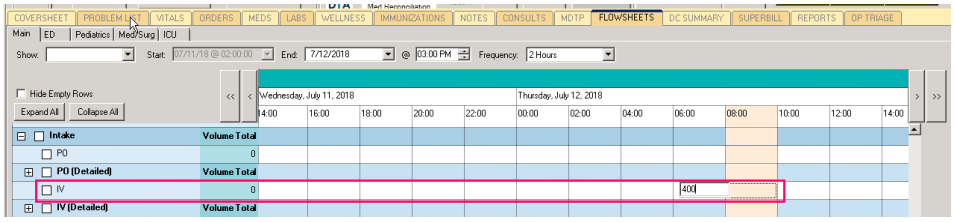

Figure 45: IV intake row on Flowsheets

Intake - IV (Detailed)

With the IV (Detailed) intake option, users can expand the menu and document intake on specific IV fluid or medication orders. The IV intake detailed entries update the overall Intake volume total and factor into calculated Fluid Balance totals. Six sub-categories In the IV (Detailed) profile configuration can be included on Flowsheets:

1. Unspecified: Allows the user to enter a volume intake on an IV fluid or medication that is not displayed under another category.

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2. Continuous Infusions: Lists active or pending fluids, or assigned medications: Admixtures, Chemo Admixture, Hyperal (TPN), Continuous Syringe or Chemo Continuous Syringe, as designated by your pharmacy.
3. Intermittent Infusions: Lists active or pending fluids or assigned medications: Piggyback, Chemotherapy Piggyback, Intermittent Syringe, Chemo Intermittent Syringe as designated by your pharmacy.
4. Injection: Lists active or pending fluids or medications assigned as a unit dose medication and include a route designated in the BEHOFS IO INJECTION ROUTES XPAR. Included in the default XPAR list: Intravenous, Subcutaneous, Subcutaneously, Intramuscular and Epidural. Configure additional routes in the XPAR for the medication to display under the Injection category.
5. Inactive: Lists inactive orders within this submenu. Newly inactive orders auto-populate this submenu based on inactive order status. Inactive order statuses include the following: Expired, Discontinued, Cancelled, DC/Edit, Renewed, & Complete.
6. Historical: Displays IV intakes that were entered before this release (2018.1.5).

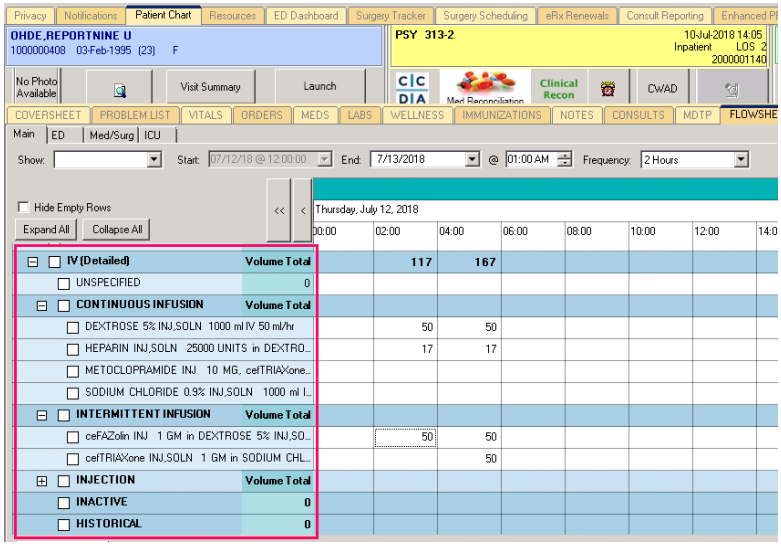

Figure 46: Example of IV(Detailed) Intake on Flowsheets

The Intake IV (Detailed) section dialog allows the user to document intakes on multiple IV fluids at once, regardless of category type.

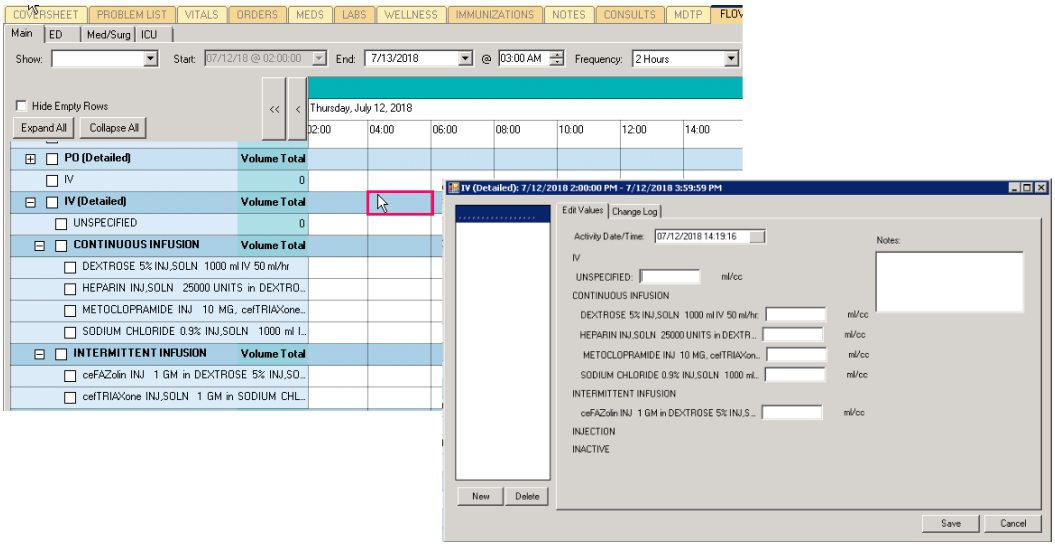

Figure 47: IV Intake (Detailed) section dialog

The Intake IV category dialog (Continuous Infusion, Intermittent Infusion, etc.) enables users to document intakes on multiple IV fluids at once within that category.

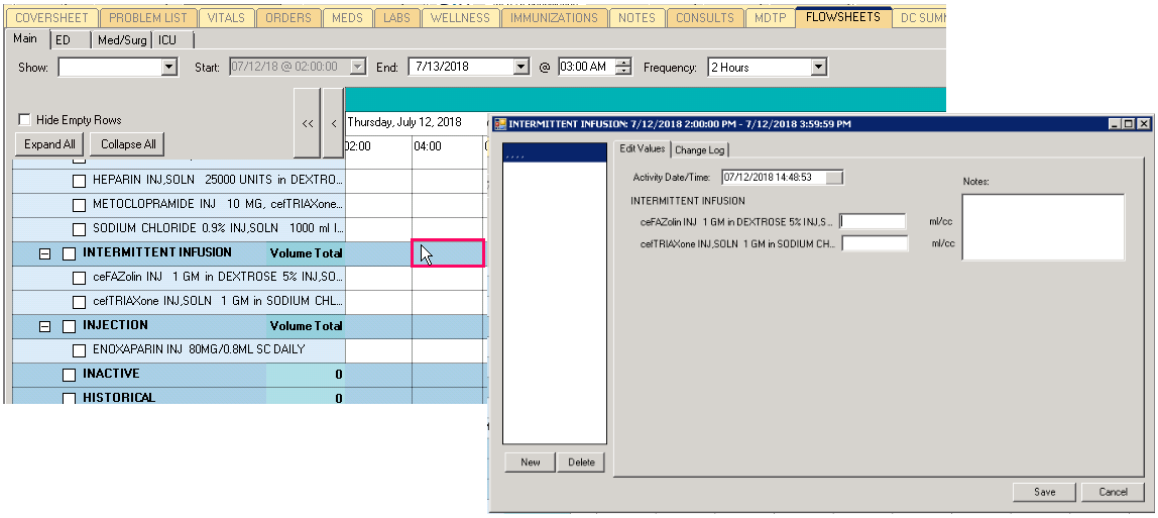

Figure 48: Intake IV category dialog

The Medication or IV fluid intake dialog displays an Activity Date/Time field, the medication or fluid details, a Volume (ml/cc) field and a Notes field. Volumes entered in this dialog update the Intake volume total, and factor into calculating the Fluid Balance totals.

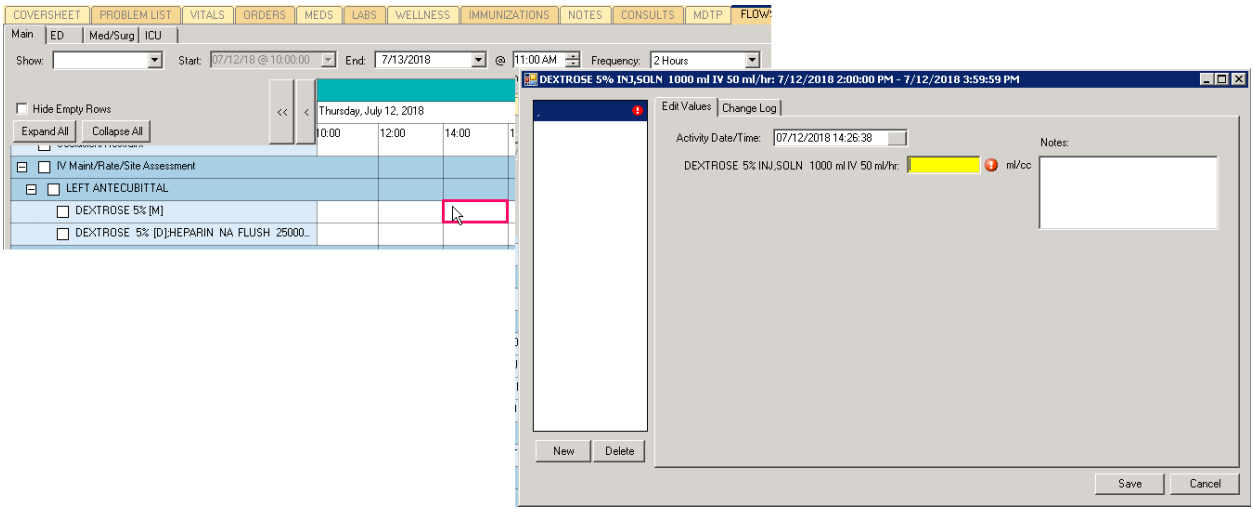

Figure 49: Medication/IV fluid Intake dialog

Right click on the intake entry on Flowsheets to access two options: Enter/Edit Readings or Marked Entered in Error. The Enter/Edit Readings option enables the user to make a new entry or correct an existing entry. The Marked Entered in Error option allows the user to select an error reason from the drop-down menu and click OK. The entry is removed from Flowsheets but is stored in the GMRY PATIENT I/O file.

All entries and edits are logged in the Change Log, which is located on any of the documentation dialogs in the IV Intake section. The Change Log displays the User, Reading time, Old value, New value, Activity date and time, Reason for Edit, and Notes.

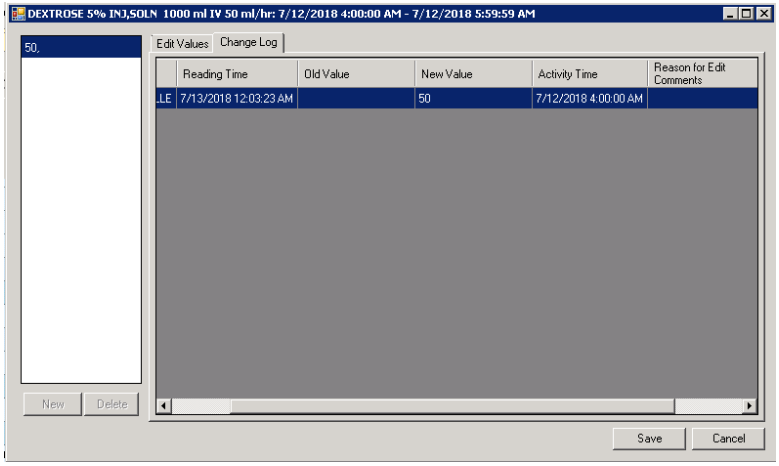

Figure 50: Change Log tab

A hover-over feature allows the user to see additional intake documentation within the time cell on the main flowsheets display. The most recent entry will appear in the hover-over window first, and the oldest entry appears last.

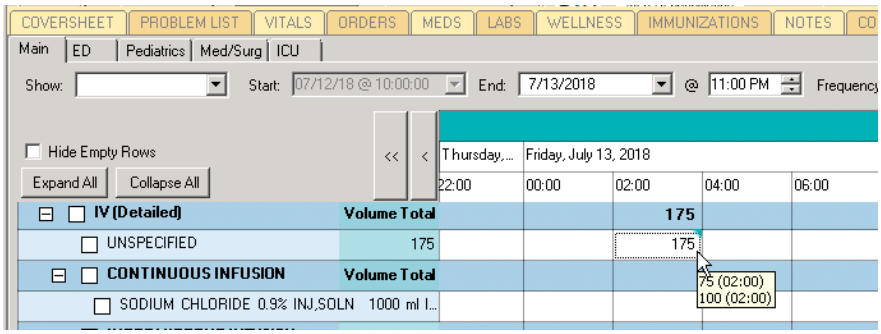

Figure 51: Intake Hover-over

Required action: Test in your facility's normal Flowsheets workflow.

Related artifacts: 21364, 22032, 22070, 22202, & 22270

Clarification on Flowsheets vital signs configuration

The following configuration is recommended for all customers entering vital signs via Flowsheets. The recommended configuration ensures appropriate Flowsheet vital sign unit labels and value retention.

Recommendations

In Flowsheets, to display vital sign labels with metric units, e.g., kg, cm:

1. Set the BEHOVM DEFAULT UNITS XPAR to METRIC for each vital sign.

```
Select Systems Manager Menu QA810(GTM02) Option: test an option not in your menu
Option entry to test: xpar
     1   XPAR EDIT BY TEMPLATE       Edit Parameter Values with Template
     2   XPAR EDIT KEYWORD       Edit Parameter Definition Keyword
     3   XPAR EDIT PARAMETER       Edit Parameter Values
     4   XPAR LIST BY ENTITY       List Values for a Selected Entity
     5   XPAR LIST BY PACKAGE       List Values for a Selected Package
Press <Enter> to see more, '^' to exit this list,  OR
CHOOSE 1-5: 3  XPAR EDIT PARAMETER     Edit Parameter Values
                        --- Edit Parameter Values ---

Select PARAMETER DEFINITION NAME: BEHOVM DEFAULT UNITS     Default units for mea
surement

BEHOVM DEFAULT UNITS may be set for the following:

     100 User          USR    [choose from NEW PERSON]
     200 Class         CLS    [choose from USR CLASS]
     300 Service       SRV    [choose from SERVICE/SECTION]
     400 Location      LOC    [choose from HOSPITAL LOCATION]
     500 Division      DIV    [choose from INSTITUTION]
     900 System        SYS    [VISTA.GOLD.MEDSPHERE.COM]

Enter selection: 900  System   VISTA.GOLD.MEDSPHERE.COM

----- Setting BEHOVM DEFAULT UNITS  for System: VISTA.GOLD.MEDSPHERE.COM -----
Select Measurement Type: WEIGHT

Measurement Type: WEIGHT//   WEIGHT   WEIGHT
Default Units: METRIC//
```

Figure 52: BEHOVM DEFAULT UNITS XPAR

2. In the BEH MEASUREMENT CONTROL file:

a. For a vital sign with only one unit option, e.g., blood pressure:

- Set the DEFAULT UNITS field to US even if the actual measurement is metric.
- Set the UNITS (US) field the same as the UNITS (METRIC) field.

```
Select BEH MEASUREMENT CONTROL NAME: blood pressure
     1   BLOOD PRESSURE
     2   BLOOD PRESSURE MEAN
CHOOSE 1-2: 1  BLOOD PRESSURE
NAME: BLOOD PRESSURE//
ABBREVIATION: BP//
DEFAULT UNITS: US//
UNITS (US): mmHg//
UNITS (METRIC): mmHg//
```

Figure 53: BEH MEASUREMENT CONTROL blood pressure file

b. For a vital sign with different US and METRIC units, e.g., weight, height:

- Set the DEFAULT UNITS field to US even if the actual measurement is metric.
- Set the UNITS (US) and UNITS (METRIC) fields appropriately.
- Verify that the US to METRIC and METRIC to US fields contain the appropriate conversion formula.

```
Input to what File: GMRV VITAL TYPE// BEH MEASUREMENT CONTROL
                                      (109 entries)
EDIT WHICH FIELD: ALL//


Select BEH MEASUREMENT CONTROL NAME: WEIGHT
NAME: WEIGHT//
ABBREVIATION: WT//
DEFAULT UNITS: US//
UNITS (US): lb//
UNITS (METRIC): kg//
NORMAL LO:
NORMAL HI:
```

Figure 54: BEH MEASUREMENT CONTROL for weight

Required action: System administrators with PuTTY access should review the current configuration and make changes according to recommendations. Test in your normal Flowsheets vital signs entry workflow.

Related artifact: 22315

Radiology

New Radiology Exam Processing Menu Option - MSCRA Patient Req Processor

The MSCRA Patient Req Processor [MSCRA PROCESSOR] is added to the Rad/Nuc Med Technologist Menu [RA TECHMENU]. Prior to the development of this option, the user accessed different menu options to register a patient for a procedure, update the status of an exam, cancel a procedure and change sign on locations. The MSCRA Processor enables all these tasks within one menu option.

Access to this menu option is not locked by any security key. Once accessed, the user sees a list of requests from RAD/NUC MED ORDERS file (#75.1) for the selected Imaging Location(s). The user can view requests from multiple imaging locations and change the sign on imaging location.

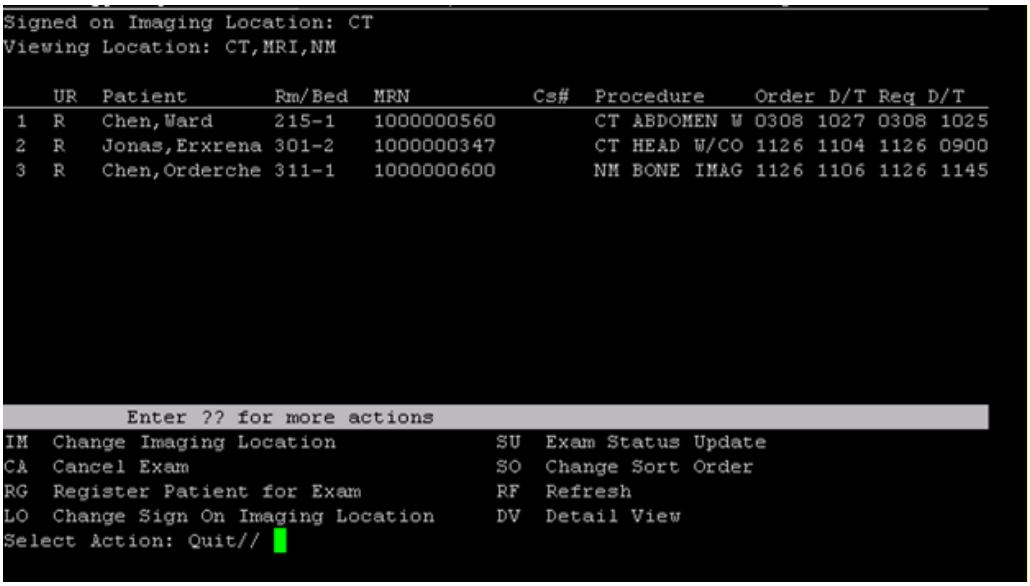

Figure 55. MSCRA Processor Summary View

MSCRA Processing Options

Once the user selects the menu option and then indicates the Sign on Imaging location, all exams for that location display. The user can use the IM – Change Imaging Location function to change or add more viewing locations. The LO – Change Sign on Imaging Location option can be used to change the Signed on location.

The UR – Urgency column displays first and indicates if the exam is routine or stat. Then the patient name, room number and MRN display. If the exam is registered, a Case number (CS#) displays. Once the exam is registered, the Req D/T displays the registered date/time. The procedure name, as well as the ordered and requested date and time (if indicated), then display.

Detail View

More information on the patient/exams, such as date of birth, mode of transport, requesting physician and registered date/time, is available by using the DV – Detailed View option. The user can select 1 or more patients for which to view this information.

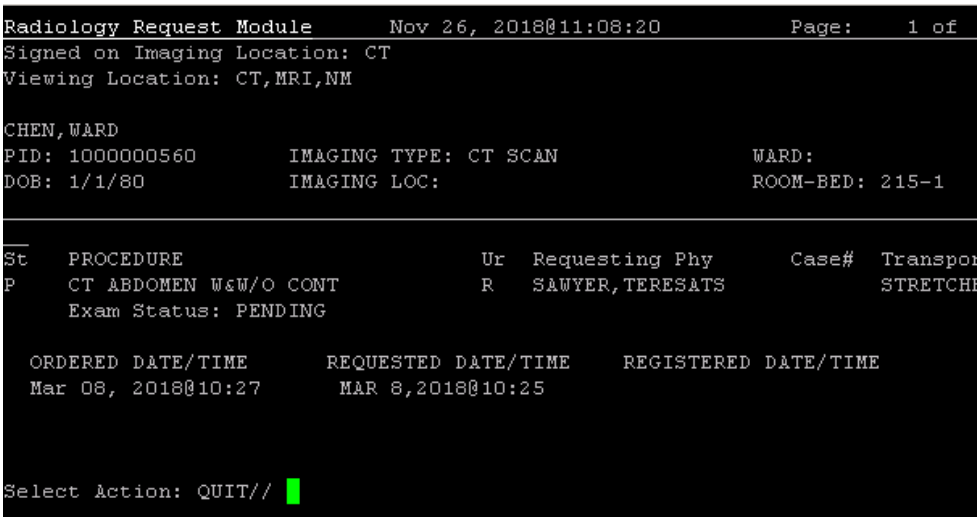

Figure 56: MSCRA Processor Detail View

Sort

The user can sort the list of exams by Patient, Imaging Type, Exam Status, Procedure and Order Date/time to facilitate different workflows. No matter what sort is used, STAT orders display at the top.

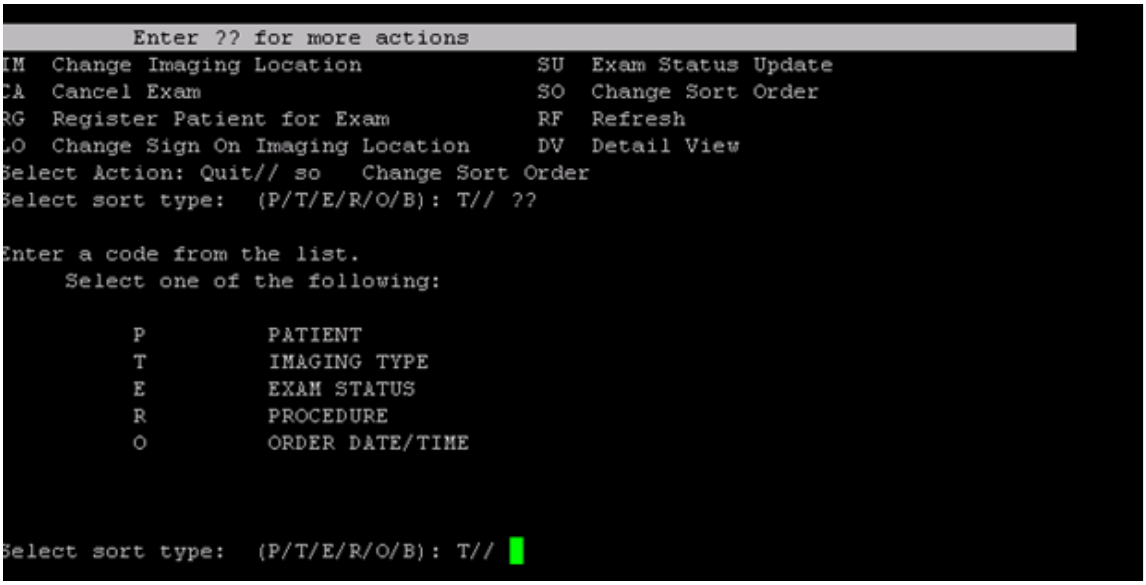

Figure 57: MSCRA Processor Sort options

Radiology Exam Options

The Radiology user can register an exam using the RG – Register Patient for Exam option. A case number displays and is shown on the processor display. An exam can be canceled using the CA Cancel Exam option.

The SU Exam Status Update option can be used to update the status of an exam. This is basically the same option as Case No. Exam Edit or Status Tracking of Exams available through the usual radiology menus.

Navigation Tips

The user can enter two question marks “??” and view a list of navigational shortcuts.

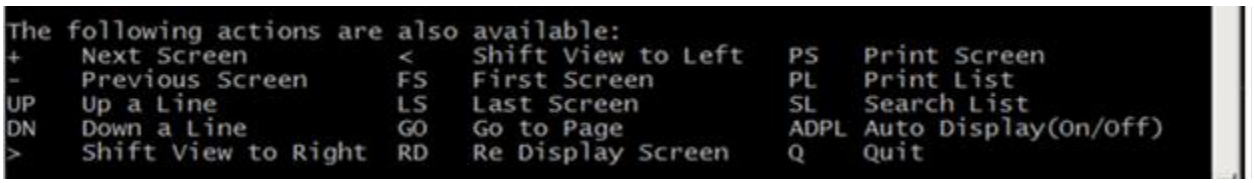

Figure 58: MSCRA Processor shortcuts

Parameters

The MSC Radiology Process respects the same parameters as the CareVue Radiology Worklist. Below is a list of those parameters.

- MSC RAD PENDING PAST DAYS: This value determines the number of past days to gather data for radiology orders still in PENDING status. Set this value to 2.
- MSC RAD PENDING FUTURE DAYS: This value determines the number of future days to gather patient data from the RAD ORDER file for radiology orders in PENDING status. Set this to 2.
- MSC RAD WAITING DAYS: This value determines the number of past days to gather data for

radiology orders in the WAITING status. Set this value to 0.

- MSC RAD CALLED DAYS: This value determines the number of past days to gather data for radiology orders in the CALLED status. Set this value to 0.
- MSC RAD EXAMINED DAYS: This value determines the number of past days to gather data from the RAD ORDER file for radiology orders in EXAMINED status. Set this value to 0.
- MSC RAD TRANSCRIBED DAYS: This value determines the number of past days to gather data for radiology orders in the TRANSCRIBED status. Set this value to 0.
- MSC RAD COMPLETE DAYS: This value determines the number of past days to gather data for radiology orders in the COMPLETED status. Set this value to 0.
- MSC RAD CANCELLED DAYS: This value determines the number of past days to gather data for radiology orders in the CANCELLED status. Set this value to 0.
- MSC RAD EXAM STATUS: This value determine the types of Exam Statuses to return in the data array. This parameter must be set to :WAITING FOR EXAM:CALLED FOR EXAM:EXAMINED:CANCELLED:

Document flow rate for radiology procedures

There is a new FLOW RATE field in the status update, case edit, and MSCRA processor workflows. It is displayed in the Radiology module on the Patient Profile tab, as well as in CareVue imaging reports.

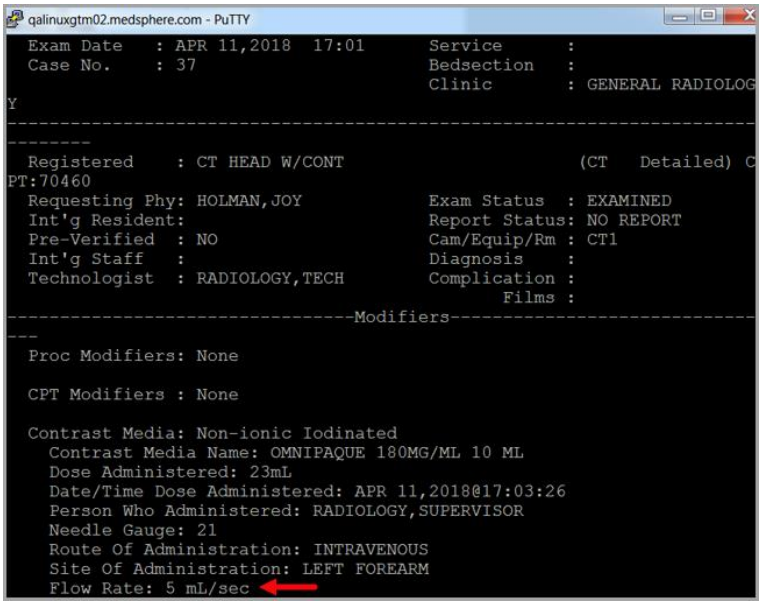

Figure 59. New Flow Rate field in PuTTY

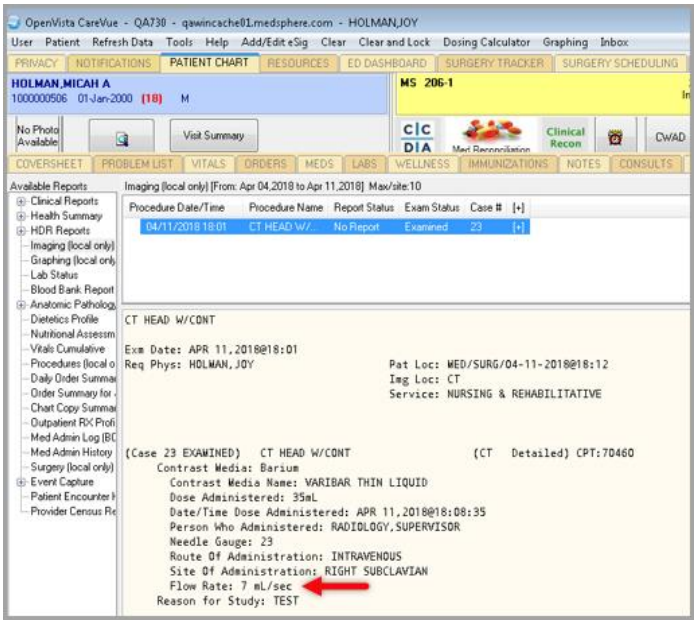

Figure 60. New Flow Rate field in CareVue

Required action: Test in your normal radiology exam status update, case edit, and MSCRA processor workflow.

Related artifact: 21708

Procedure processing can now automatically generate a radiopharmaceutical charge

A Radiology application user can now automatically generate a charge event for a radiopharmaceutical when it meets two criteria:

- It is associated with a nuclear medicine procedure during status update
- The study is advanced to either Examined or Completed status, depending on site configuration.

When set to Y, a new MSC RAD CHARGE RADIOPHARM XPAR generates a charge message for a radiopharmaceutical during status update to either Examined or Complete. The dose entered for the radiopharmaceutical is sent in the FT1-11 segment of the outbound charge message. A quantity of 1 is sent in the FT1-10 segment of the charge message.

If the status of the procedure is subsequently reduced to a lower level, a credit message is generated. The user can also perform a manual credit for the procedure and/or the radiopharmaceutical.

```
Select PARAMETER DEFINITION NAME: msc rad chARGE RADIOPHARM     MSC Rad Charge r
adiopharm
Select INSTITUTION NAME: gen
     1   GENERAL HOSPITAL                    058
     2   GENERAL HOSPITAL WEST
CHOOSE 1-2: 1  GENERAL HOSPITAL              058

----- Setting MSC RAD CHARGE RADIOPHARM  for Division: GENERAL HOSPITAL -----
SEND CHARGE MESSAGE FOR RADIOPHARM: ??

DETERMINES WHETHER OR NOT A CHARGE MESSAGE IS GENERATED FOR THE
RADIOPHARMACEUTICAL ASSOCIATED WITH A NUCLEAR MEDICINE PROCEDURE.

SEND CHARGE MESSAGE FOR RADIOPHARM:
```


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Figure 61: MSC RAD CHARGE RADIOPHARM parameter

Required action: Test in your normal nuclear medicine procedure processing workflow in PuTTY.

Related artifact: 21764

Enhancements to the CareVue Radiology Worklist

Worklist

CareVue Radiology Worklist enhancements include new Urgency, Ordered Date and Registered Date columns. In addition, the Worklist now sorts according to Urgency by default so that stat exams appear first in the list, followed by ASAP exams and then routine exams.

Other GUI Changes

The CareVue Radiology Worklist's Refresh button now enables users to rapidly update the record. The last refreshed date/time appears next to the Refresh button. The default text for the worklist is also larger for better readability. The ability to make the text larger or smaller remains the same but the Normal Text button is renamed Reset Text.

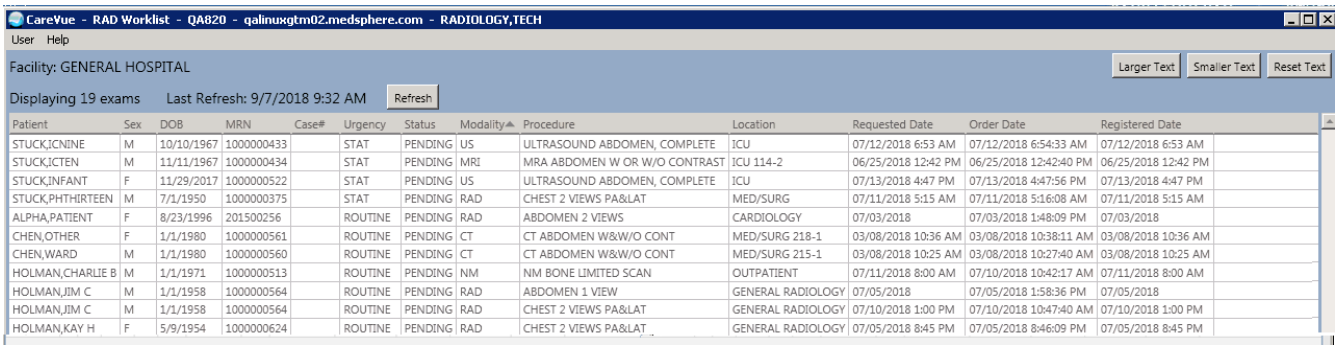

Figure 62: CareVue Rad Worklist tab

Required action: Test in your normal procedure processing workflow.

Related artifact: 22057

Radiology location information included in charge messages

Radiology charge messages now include patient location in FT1.16 as an abbreviation from file 44.1. This applies to all radiology exam charges, as well as radiopharmaceutical and contrast charge messages.

Required action: Test in your normal radiology exam, contrast and radiopharmaceutical charging workflow.

Related artifact: 22073

Reminders

Reminder Reports now correct for outpatient visits

Reminder Reports for outpatient visits now display correctly.

Required action: Test in your Reminder Report workflow.

Related artifact: 21976

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Pharmacy

New Labels per Day field

A new NUMBER OF LABELS PER DAY field added to the PuTTY Pharmacy application enables the user to indicate the number of labels needed per day for an IV Admixture order. This field displays when choosing to edit the infusion rate of an admixture during verification or during order entry of an IV admixture directly into PuTTY.

```
INFUSION RATE: 30 ml/hr
NUMBER OF LABELS PER DAY:
```

Figure 63. NUMBER OF LABELS PER DAY field

Required action: Test in your normal pharmacy IV admixture verification process.

Related artifact: 21400

Infusion Instructions file enables entry abbreviations

A new INFUSION INSTRUCTIONS file allows sites to set up abbreviations for entry in the Infusion Rate field that are later expanded to a text string of up to 30 characters. The added Infusion Instructions Management (PSS INFINS MGR) menu holds the new Infusion Instructions Add/Edit (PSS INFINS ADED) option and Infusion Instructions Report (PSS INFINS RPT) option, which allow editing and listing of the contents of the INFUSION INSTRUCTIONS file (#53.47).

The Infusion Instructions Management [PSS INFINS MGR] menu has been added to the Pharmacy Data Management [PSS MGR] menu.

```
Select Pharmacy Data Management MSC PMPHARM(GTM) Option: pharmacy data Managemen
t


          Dosages ...
          Drug Enter/Edit
          Order Check Management ...
          Electrolyte File (IV)
          Lookup into Dispense Drug File
          Medication Instruction Management ...
          Medication Routes Management ...
          Orderable Item Management ...
          Formulary Information Report
          Drug Text Management ...
          Pharmacy System Parameters Edit
          Standard Schedule Management ...
          Synonym Enter/Edit
          Controlled Substances/PKI Reports ...
          IV Additive/Solution ...
          Warning Builder
          Warning Mapping
          Check Drug Interaction
          PEPS Services ...
          Infusion Instruction Management ...
```

Figure 64. Pharmacy Data Management Menu

```
Select Infusion Instruction Management PMPHARM(GTM) Option: INF
    1    Infusion Instructions Add/Edit
    2    Infusion Instructions Report
CHOOSE 1-2: 1  Infusion Instructions Add/Edit

Select INFUSION INSTRUCTIONS NAME: NITRO
  Are you adding 'NITRO' as a new INFUSION INSTRUCTIONS (the 2ND)? No// Y
  (Yes)
   INFUSION INSTRUCTIONS EXPANSION: TITRATE TO BLOOD PRESSURE

Select INFUSION INSTRUCTIONS NAME:
```

Figure 65. Infusion Management Menu

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```
INFUSION RATE: NITRO     Now expanding text
 Input expanded to TITRATE TO BLOOD PRESSURE   0 Labels per day
              at an infusion rate of: TITRATE TO BLOOD PRESSURE
NUMBER OF LABELS PER DAY: 1
MED ROUTE: IV//
```

Figure 66. INFUSION RATE field with NITRO instruction abbreviation

Required action: Use the Infusion Instruction Add/Edit option to create an abbreviation and infusion instruction text. Enter or verify an IV Admixture order utilizing the Infusion Instruction abbreviation.

Related artifact: 21400

Invalid Date/Time for IV labels

A new INVALID DATE/TIME field added to the PHARMACY PATIENT (#55) sub-file provides the date/time an IV label was invalidated due to a change or edit made to the IV order. Each time an IV order is changed, BCMA IV parameters are checked to determine if the change should invalidate IV labels printed prior to the change, or if the IV labels printed prior to the change should continue to be available for infusing. These invalidated labels display to the pharmacy user upon verifying the IV order change.

```
     **  Edit to SCHEDULE has invalidated the following IV labels  **
    (Invalid IV labels cannot be reprinted or marked as Infusing in BCMA)

Label Date/Time  Unique ID            Status      Count BCMA Action-Date/Time
---------------  --------             ---------   ----- ----------------------
06/14/18 08:19   737V111                          YES
06/14/18 08:19   737V112                          YES

Enter 'P' to print list of Invalidated Labels or RETURN to continue:
```

Figure 67. Invalid Date/Time Display

Required action: Enter an IV piggyback order in CareVue. Verify the order in PuTTY Pharmacy. Edit that order by changing a field that will cause a new order to be created, e.g., dose or schedule. Accept and the verify this change to cause the invalid IV labels to display.

Related artifact: 21400

Enabling changes to the Drug Enter Edit field in Pharmacy Data Management (Ann)

The following fields were added to the Drug Enter Edit option to support potential future Pharmacy Data Management functionality.

- NCPDP Quantity Multiplier: Determines metric quantity for electronic third-party billing purposes.
- NCPDP Dispense Unit: Indicates the NCPDP standard billing unit of measure (EA = EACH; GM = GRAMS; ML += MILLILITERS).

The Drug Enter Edit option no longer includes the following fields:

- LAST PRICE UPDATE
- BENCHMARK PRICE PER ORDER UNIT
- BENCHMARK PRICE PER DISP UNIT
- SOURCE OF SUPPLY
- RESTRICT BY PAT ELIGIBILITY
- Select OUTPATIENT SITE

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Required action: Test by viewing the Drug Enter Edit fields for a medication.

Related artifact: 21400

ICON Legend option displays icons throughout BCMA

When selected, a new Icon Legend menu option added to the BCMA View menu displays a dialog with icons and corresponding descriptions used throughout BCMA.

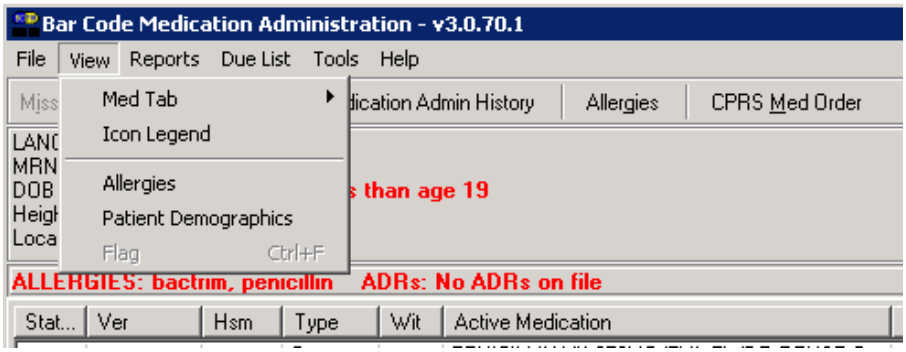

Figure 68. View Menu

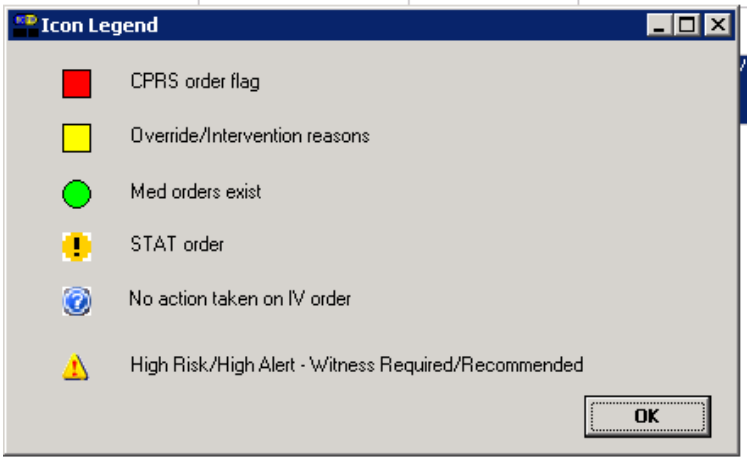

Figure 69. Icon Legend

Required action: Test by logging into BCMA and selecting the Icon Legend option in the View menu.

Related artifact: 21400

New RXCUI and MSC Generic RXCUI fields enable easier data updates

The pharmacy data management menu option Drug Enter/Edit now displays the RXCUI and the MSC Generic RXCUI fields, which enable users to update or add this information to assist in eRx drug mapping and Meaningful Use reporting. Users are no longer required to use FileMan to access these fields.

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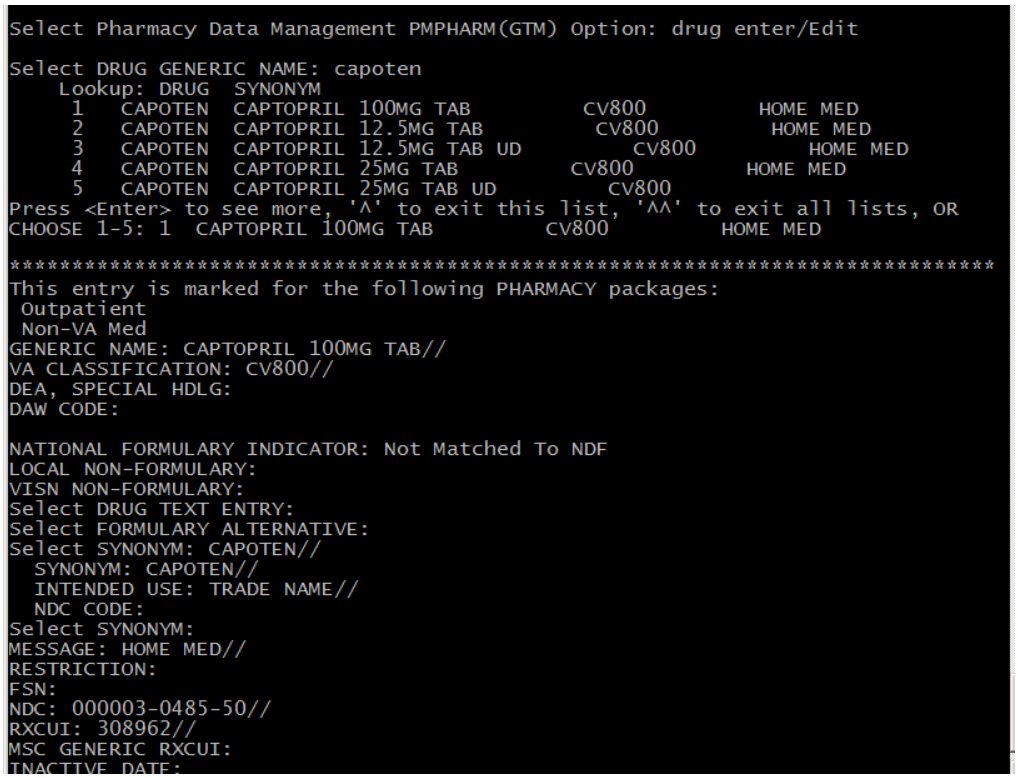

Figure 70. Pharmacy Data Management – Drug/Enter Edit

Required action: Test in your normal process for entering and editing drugs.

Related artifact: 21800

Laboratory

Client sites can default to Immediate Collect for lab test orders

Customer sites can now configure the LR DEFAULT TYPE FOR QUICK ORDERS parameter for Immediate Collect. In previous versions of CareVue the only options were Ward Collect, Send Patient and Lab Collect.

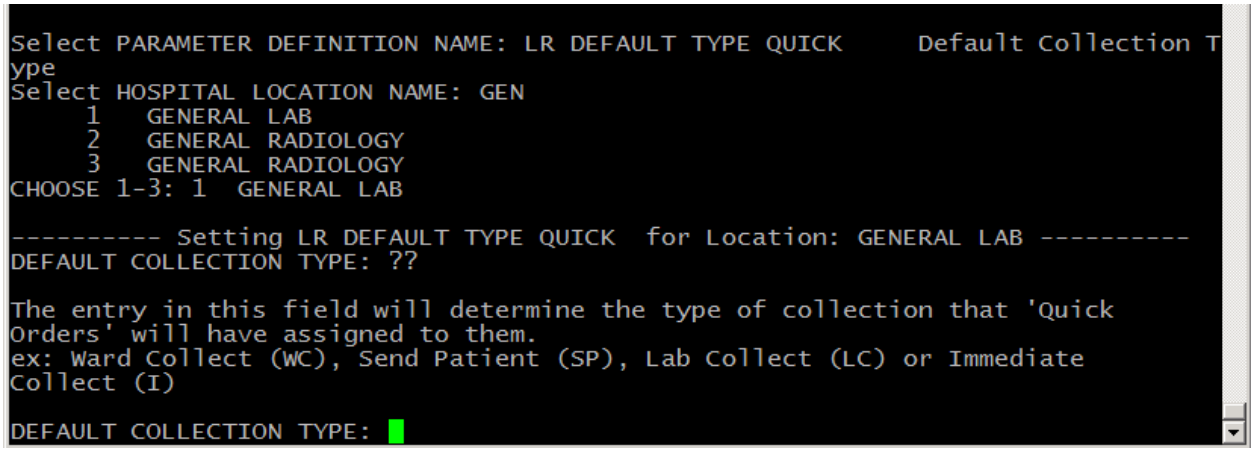

Figure 71. LR DEFAULT COLLECT QUICK parameter

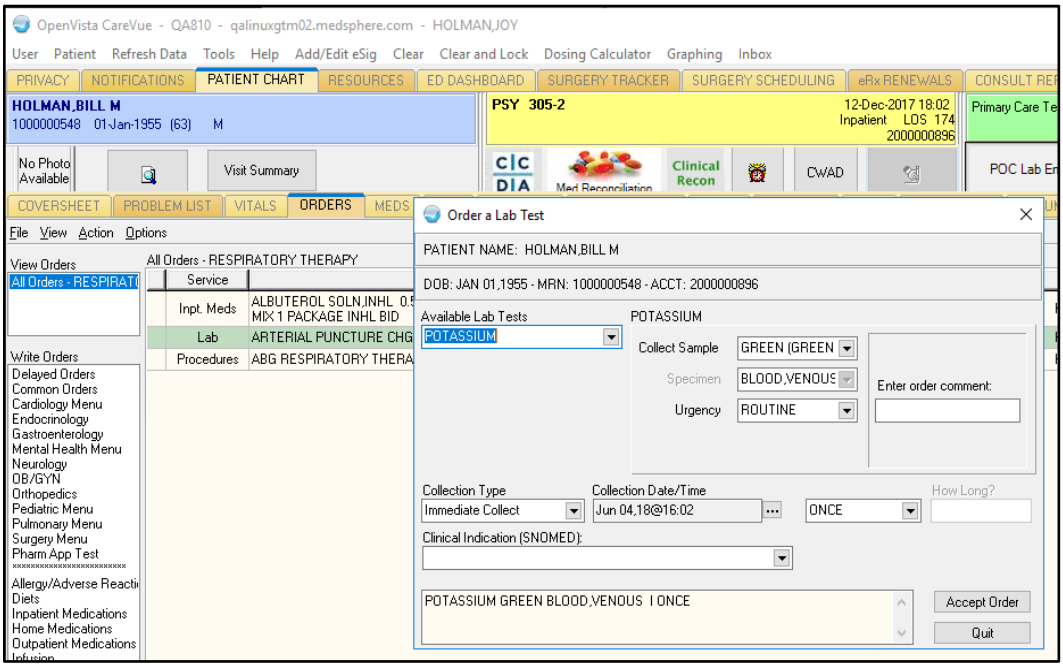

Figure 72. Lab Test Order dialog

Required action: Test in your normal lab test processing workflow within CareVue with this parameter configured in PuTTY.

Related artifact: 21869

Multi-Disciplinary Treatment Plan

New Chronic status added to Problems component

A new Chronic option is now available in the Status drop-down menu of the Problems section in MDTP.

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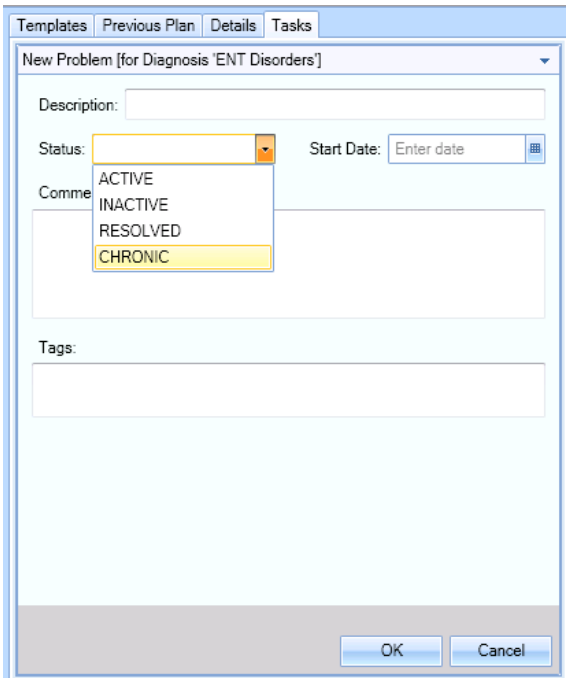

Figure 73. The MDTP Tasks tab with Status drop-down menu displayed

Required action: Test in your normal MDTP workflow.

Related artifact: 21879

Auto Fax

Auto Faxing laboratory and radiology results to the PCP

A new Primary Care Physician file (MSC PRIMARY CARE PHYSICIAN) enables PCPs to receive radiology and/or laboratory results via the Auto Fax application.

Populate PCP information in this file one of two ways:

- Manually by a system user
- Automatically via certain ADT messages containing the PCP ID number (assigned by the ADT system) and name in HL7 fields PD1 4.1 and PD1 4.2, respectively

Both elements must be available in the ADT HL7 message for this information to populate the file automatically. These primary care fields are supported by the following ADT HL7 message types:

- A01
- A04
- A05
- A06
- A07
- A08

The MSC AUTO FAX MAIN MENU can also be used.

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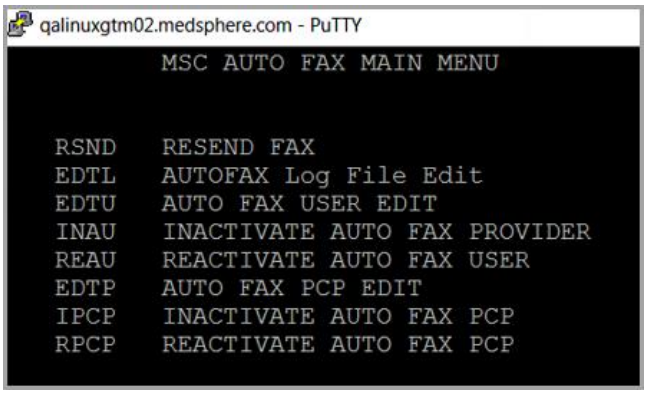

Figure 74. MSC Auto Fax Main Menu

FileMan options to configure Auto Fax

Use FileMan to edit or add to the new MSC PRIMARY CARE PROVIDER file and manually configure MSC AUTO FAX PCP settings. Provider ID is determined by the ADT system when manually setting up a PCP. Once the provider is entered, configure the MSC AUTO FAX PCP settings for Auto Fax based on the provider's needs. The provider can receive faxes for only laboratory results, only radiology results or both using the MODULE setting. The provider can also receive faxes for inpatient, outpatient or both for each module using the LAB PATIENT LOCATION and RAD PATIENT LOCATION settings.

Related artifact: 21827

Group Notes

New criteria indicator added to Group Notes

A new indicator added to the Group Notes module displays an asterisk (*) to the left of the patient names when Medicare patients meet particular criteria:

- The patient has Medicare as a payer defined in the **PATIENT** file in the **INSURANCE TYPE** (mult) field.

AND

- The MSC GRP NOTES MEDICARE DISP and MSC GRP NOTES INS FIELD HOLD parameters are both set to YES.

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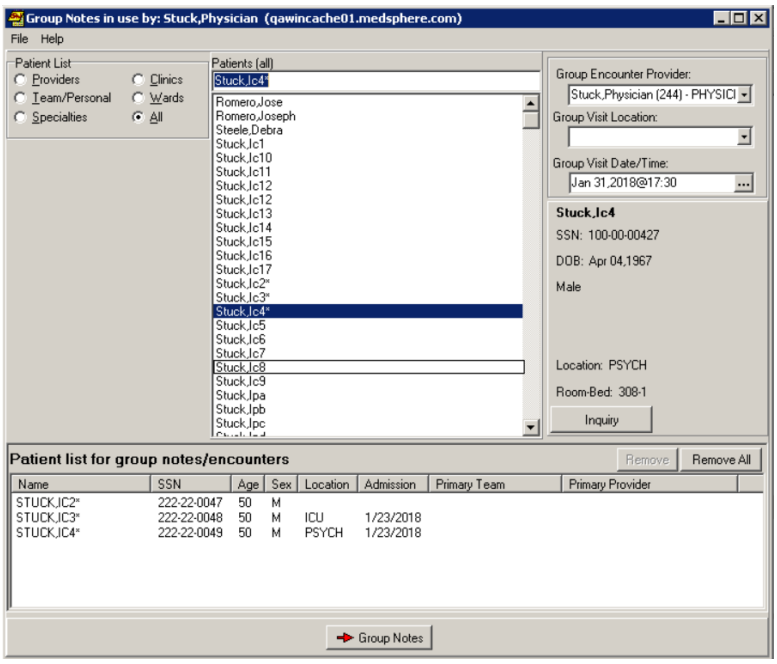

Figure 75. Group Notes in use window

Required action: Visit the record of a patient you know is on Medicare and confirm appearance of an asterisk next to the patient name.

Related artifact: 21335

Patient Data Objects

New patient data object: Patient age in hours

A new Patient Age in Hours data object assists providers in working with patients under the age of 1 year. If the patient selected is older than 1 year, the object displays age in years. Patient records with no birth date/time defined will display a BIRTH TIME UNKNOWN message.

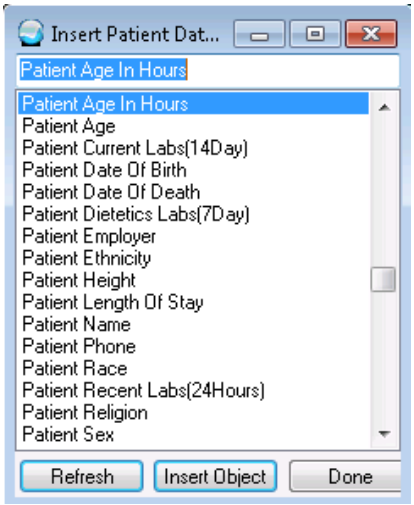

Figure 76. The Patient Age in Hours option

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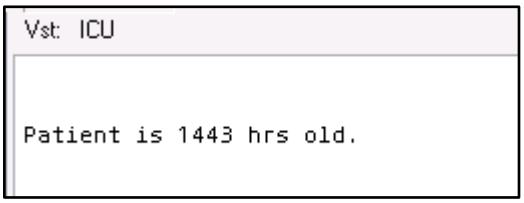

Figure 77. Example of Patient Age in Hours display

Required action: Test in your normal documentation workflow.

Related artifact: 21358

New data object for recent lab results

A new data object displays lab results for the previous 24 hours.

Required action: Test in your normal documentation workflow.

Related artifact: 21360

New patient data object displays recent imaging exams

A new patient data object added to CareVue displays imaging exams and impressions for the previous 24 hours.

```
Imaging Date/Time      Procedure                      Interpreting Staff
Feb 16, 2018@11:58     ABDOMEN MIN 3 VIEWS+CHEST      RADIOLOGY,RADIOLOGIST
Impression: Interval mild improvement in upper abdominal adenopathy as
described above.
```

Figure 78. Recent imaging exams and impression

Required action: Test in your normal documentation workflow.

Related artifact: 21361

New I & O patient data object provide time-constrained patient data

Two new intake and output (I&O) patient data objects display relevant patient data for defined time periods. The I & O (24 hrs) object displays intake and output totals, as well as patient fluid balance from flowsheet documentation, for the previous day. The I & O (5 days) object displays the 24-hour intake and output totals, as well as patient fluid balances for the previous 5 days. Marked Entered in Error entries on I&O from Flowsheets are removed from I&O PDO volume totals.

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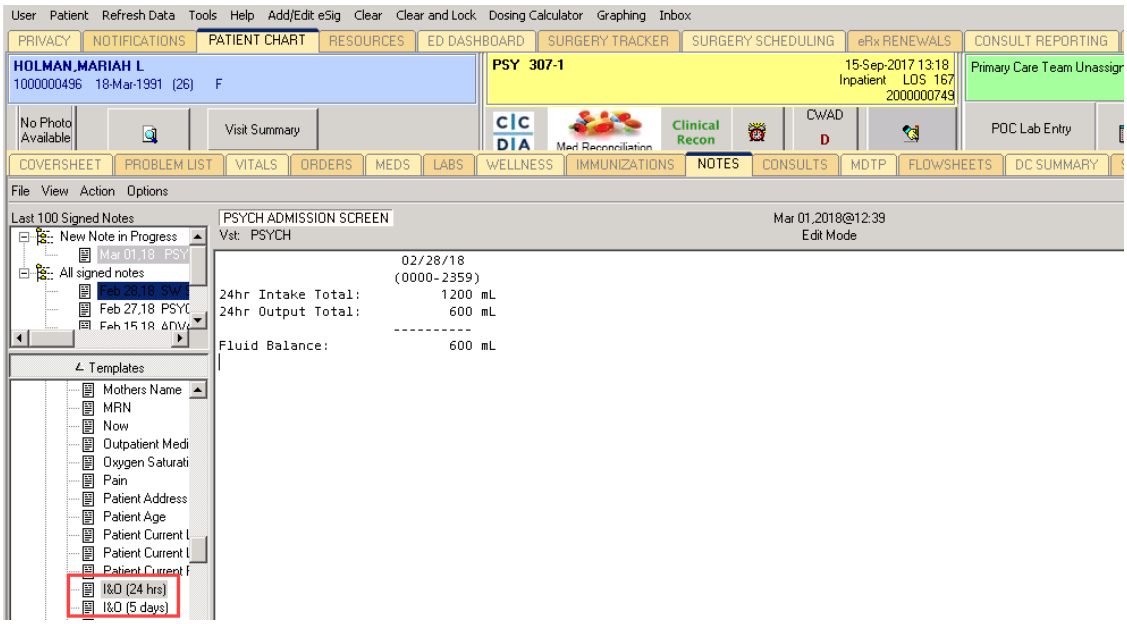

Figure 79. I & O (24 hours) note

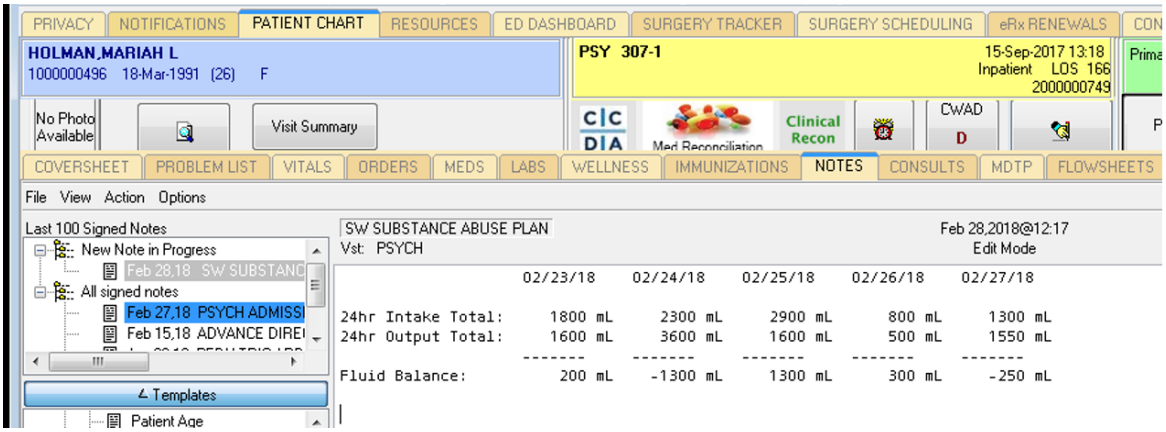

Figure 80. I & O (5 days) PDO note

Required action: Test in your normal Note/TIU workflow.

Suggested additional testing: ·

- Enter IV intake volumes for the previous five days in the IV Maintenance section of Flowsheets.
  - Add the I&O (24 hours) and I&O (5 days) objects to a note on a test patient and verify that volumes are accurate.
- Change an intake or output entry to Marked Entered in Error.
  - Add the I&O (24 hours) and I&O (5 days) objects to a note on a test patient and verify that the volumes are accurate.

Related artifacts: 21434 & 21762

Enhanced patient data object improves discharge lab results reporting (Julie)

Updates to the recently created PATIENT CURRENT LABS (24HRS) patient data object for use in discharge summaries now better reflect lab result data. In addition, improved logic returns lab results

starting from the date/time of the most recent discharge and going back 24 hours if the patient data object is inserted in a note for a patient after discharge. When the patient data object is inserted in a discharge summary prior to patient discharge, the logic returns the last 24 hours of lab results starting from NOW. The added text “For Date Range … through …” further clarifies the data results.

Recent Lab Information
For Date Range Jun 20, 2018@15:38:10 through Jun 21, 2018@15:38:10

Test: BMP Specimen: BLOOD,VENOUS Date/Time: 06/21/18@10:47:33

Test	Result	Flg	Range	Units
GLUCOSE RANDOM	88		60 - 300	mg/dL
BLOOD UREA NITROGEN	15		7 - 20	mg/dL
CREATININE	1.0		0.8 - 1.3	mg/dL
SODIUM	144		137 - 145	mEq/L
POTASSIUM	4.1		3.5 - 5.0	mEq/L
CHLORIDE	100		98 - 107	mEq/L
CARBON DIOXIDE	25		22 - 30	mEq/L
CALCIUM	9.3		8.4 - 10.2	mg/dL
OSMO SERUM	282		275 - 305	mOSm/kg
eGFR	>60		<60	ml/min
ANION GAP	15			
BUN/CREAT RATIO	14			

Test: BMP Specimen: BLOOD,VENOUS Date/Time: 06/20/18@16:23:19

Test	Result	Flg	Range	Units
GLUCOSE RANDOM	87		60 - 300	mg/dL
BLOOD UREA NITROGEN	14		7 - 20	mg/dL
CREATININE	1.0		0.8 - 1.3	mg/dL
SODIUM	134	L	137 - 145	mEq/L
POTASSIUM	4.1		3.5 - 5.0	mEq/L
CHLORIDE	100		98 - 107	mEq/L
CARBON DIOXIDE	25		22 - 30	mEq/L
CALCIUM	9.2		8.4 - 10.2	mg/dL
OSMO SERUM	282		275 - 305	mOSm/kg
eGFR	>60		<60	ml/min
ANION GAP	14			
BUN/CREAT RATIO	13			

Test: CBC W/DIFF Specimen: BLOOD,VENOUS Date/Time: 06/20/18@16:24:19

Test	Result	Flg	Range	Units
WBC	9.7		4.5 - 15	K/cmm
RBC	4.22		4.2 - 5.4	X10E6/CMM
HEMOGLOBIN	13.4		11 - 14	mg/dL
HEMATOCRIT	39.5		35 - 48	%
MCV	92			fl
MCH	32.5			pg
MCHC	33.6			g/dL
PLATELET COUNT	232			K/mm3
RDW	12.6		12.0 - 14.0	%
SEGS	60			
LYMPHOCYTES	30			
MONOCYTES	5			

Figure 81: Recent Lab Information discharge report

Required action: Test in your normal discharge summary workflow.

Related artifact: 21939

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Release 2018.1.5 Updates

CareVue

Refills Remaining update on CareVue Meds tab

The Outpatient Medications panel in the Meds tab now correctly displays the current number of refills remaining.

Required action: Test in your normal outpatient medication workflows when refilling prescriptions.

Related artifact: 21498

Clinical indicators for lab orders display in Order Details

When a clinical indication is entered in the Clinical Indicator field of a lab order, it now displays in the order details.

Required action: Test in your normal lab ordering workflow.

Related artifact: 21501

TIU Templates load from the Quick Note module

The TIU template now loads correctly when users select a Quick Note.

Required action: Choose a Quick Note with an associated template. The user is redirected to the Notes tab and the **TIU** template opens for entry.

Related artifact: 21533

Medication order comments show on the Meds tab

Comments entered in the medication order dialog during the ordering process now correctly display on the Meds tab.

Required action: In your normal workflow, enter new medication orders with added text in the comment section of the order dialog. Confirm in unsigned, pending and active status that the text entered displays for that order on the Meds tab.

Related artifact: 21347

Mumps error when merging patients repaired

An error that was preventing a patient merge no longer occurs.

Required action: Test in your normal patient merge workflow.

Related artifact: 21626

Update when transferring a home med to an inpatient med

The Transfer to Inpatient right-click option for home meds on the Meds tab now works as expected.

Required action: Test in your normal Meds tab workflow.

Related artifact: 21790

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Notifications for outpatients process as expected

The Encounter Settings for Visit dialog no longer interrupts notification processing for outpatients. The Super-Bill tab does not attempt to load outpatient lists when selected. Regarding outpatients for which the visit does not default to the Encounter Settings for Visit dialog, the user is instructed to select a visit to display Super-Bill lists. Select the CareVue button labeled “Visit not selected” to choose the correct visit. In addition, the Super-Bills button is now the Manage Super-Bills button to better reflect its function.

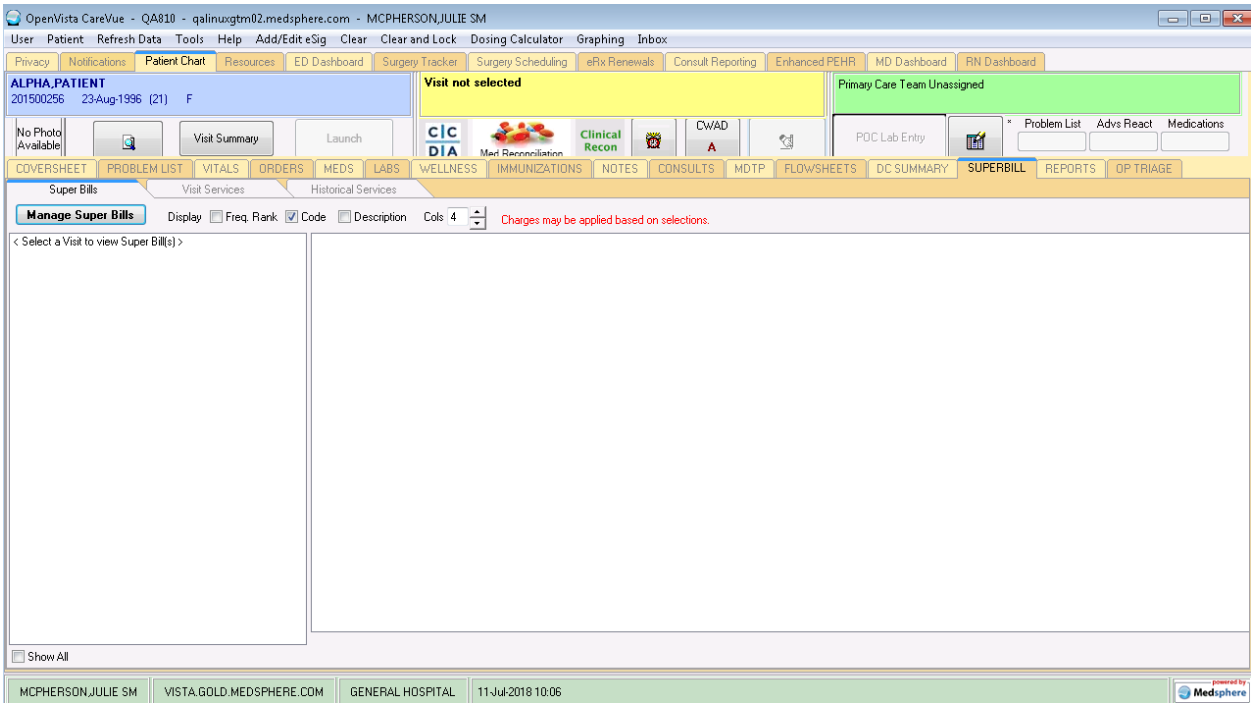

Figure 91: The CareVue Patient Chart tab with Super-Bills options

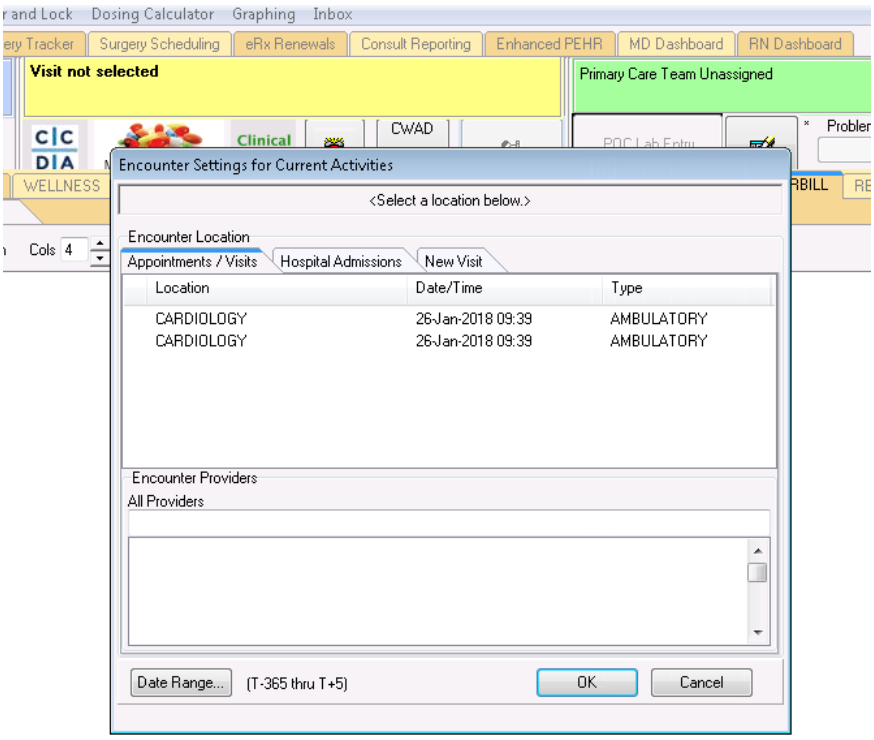

Figure 92: The Encounter Settings for Current Activities dialog

Required action: Test in your normal Super-Bill workflow.

Related artifact: 21905

DEA number included in printed prescriptions with correct format (repair)

Prescriptions printed from the Meds tab now correctly honor parameter settings and will always include the DEA number when correctly configured (parameter MSCPSO DEA PRINT is set to Yes).

Required action: Test in your normal workflows for printing prescriptions.

Related artifact: 21964

CareVue CIR handles reconciliation without error

CareVue's Clinical Information Reconciliation (CIR) function now appropriately reconciles documents and presents validation errors when they occur.

Required action: Test in your normal CIR workflow.

Related artifact: 22087

Complex order functions improved when placing orders in CareVue Orders tab

This release includes updates of several issues in the Complex order window:

- Users can add rows, which remain visible when more than seven are present.
- The AND/THEN option is clearly indicated after selection.
- The default window size upon opening is larger and more user-friendly; more empty rows load when opening the window.

- An error that could occur with a specific sequence of steps is also corrected.

Required action: Test in your normal complex medication ordering workflow.

Related artifact: 22100

BCMA/Reports

BCMA Next Action column correct for orders with Other schedule

When using the CareVue inpatient order dialog's Other schedule to customize weekly inpatient medication schedules, BCMA now displays the correct action and date/time in the Next Action column.

Required action: Using your standard inpatient medication ordering workflow, create inpatient medication orders with weekly schedules such as TU@1000 and SA@1000. Verify that the Next Action column in BCMA is correct.

Related artifact: 22297

BCMA Downtime report runs as scheduled

The MSC PSBO option, which populates the BCMA Downtime report, no longer fails when writing files to the server.

Required action: Test in your normal process for scheduling the BCMA Downtime report option to run in Taskman Scheduler.

Related artifact: 22313

Pharmacy

Other Print Info does not default to the next IV order verified

Text entered or copied into the Other Print Info field in PuTTY Pharmacy for an IV order during verification no longer defaults to the next IV order verified.

Required action: Test various methods of entering multiple infusion orders with comments in CareVue; copy/edit them in the Other Print Info field during verification. Test while logged into PuTTY Pharmacy and after logging out and then back in to verify the second IV order. Also, test by entering infusion orders directly into PuTTY Pharmacy.

Related artifact: 21233

IV orders enters via CPRS Med Order button in BCMA do not duplicate

IV Orders entered using the CPRS Med Order button in BCMA no longer duplicate when verified by a pharmacist.

Required action: Test in your normal workflow when using the CPRS button in BCMA to enter new IV orders; verifying the orders in pharmacy.

Related artifact: 21271

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Volume/dose calculation displays correctly

When the MSCPS DISPLAY VOL/DOSE CALC parameter is set to Y, an entered dose and the associated volume now correctly calculate and display for unit dose liquid and injectable medications, as well as single component IV additive orders. This calculation occurs at pharmacy order verification.

Once the order is verified by the Pharmacy application, this calculation displays in PuTTY, on pharmacy labels, in CareVue order comments and order details, and in BCMA.

Display in PuTTY

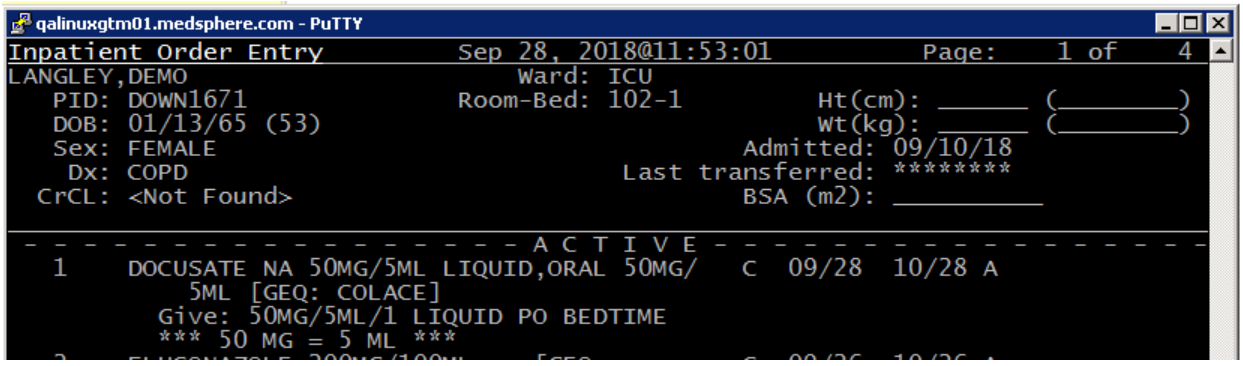

Figure 96: Inpatient Order Entry in PuTTY

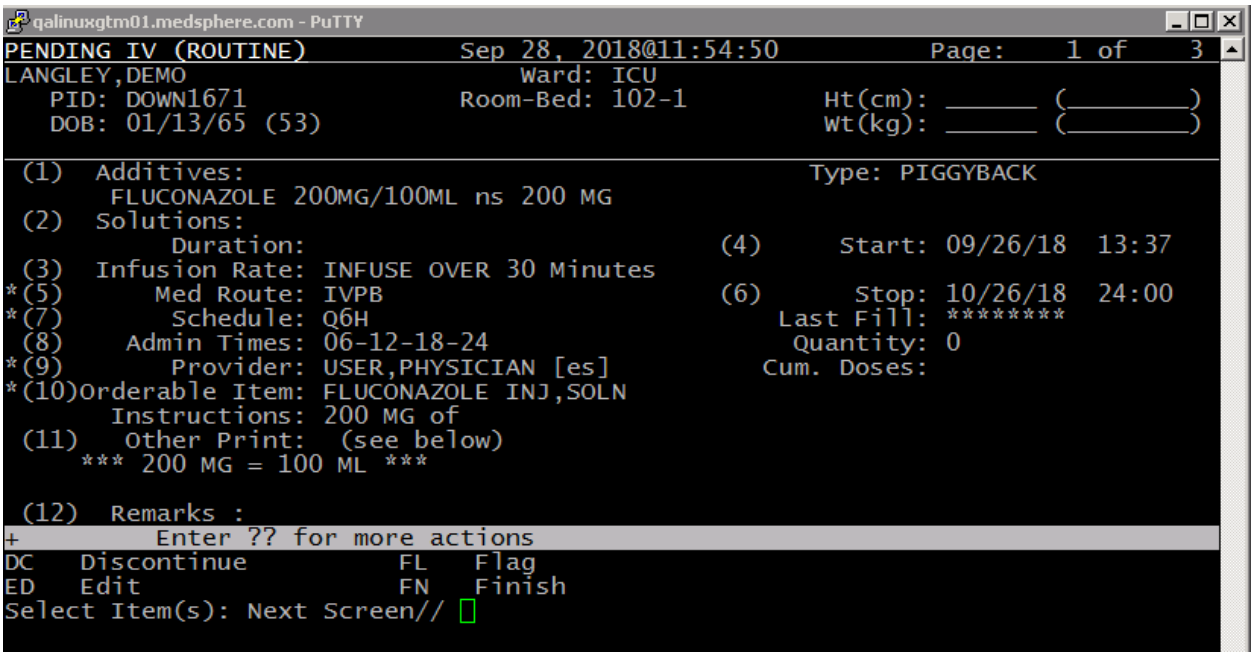

Figure 97: Pending IV PuTTY display

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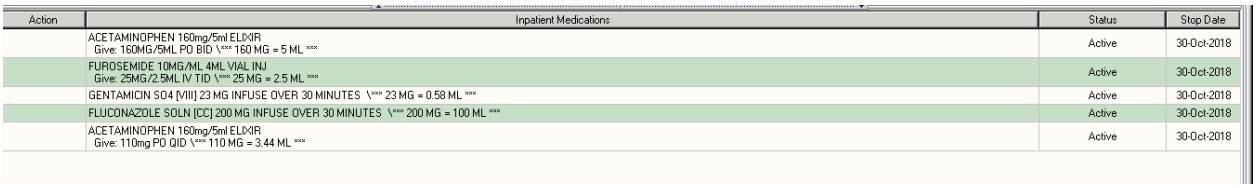
Display in CareVue Orders tab



Action	Inpatient Medications	Status	Stop Date
	ACETAMINOPHEN 160mg/5ml ELIXIR Give: 160MG/5ML PO BID *** 160 MG = 5 ML ***	Active	30-Oct-2018
	FUROSEMIDE 10MG/ML 4ML VIAL INJ Give: 25MG/2.5ML IV TID *** 25 MG = 2.5 ML ***	Active	30-Oct-2018
	GENTAMICIN SO4 [VIII] 23 MG INFUSE OVER 30 MINUTES *** 23 MG = 0.58 ML ***	Active	30-Oct-2018
	FLUCONAZOLE SOLN [CC] 200 MG INFUSE OVER 30 MINUTES *** 200 MG = 100 ML ***	Active	30-Oct-2018
	ACETAMINOPHEN 160mg/5ml ELIXIR Give: 110mg PO QID *** 110 MG = 3.44 ML ***	Active	30-Oct-2018

Figure 98: An entered dose in CareVue Orders

Display in CareVue Order details

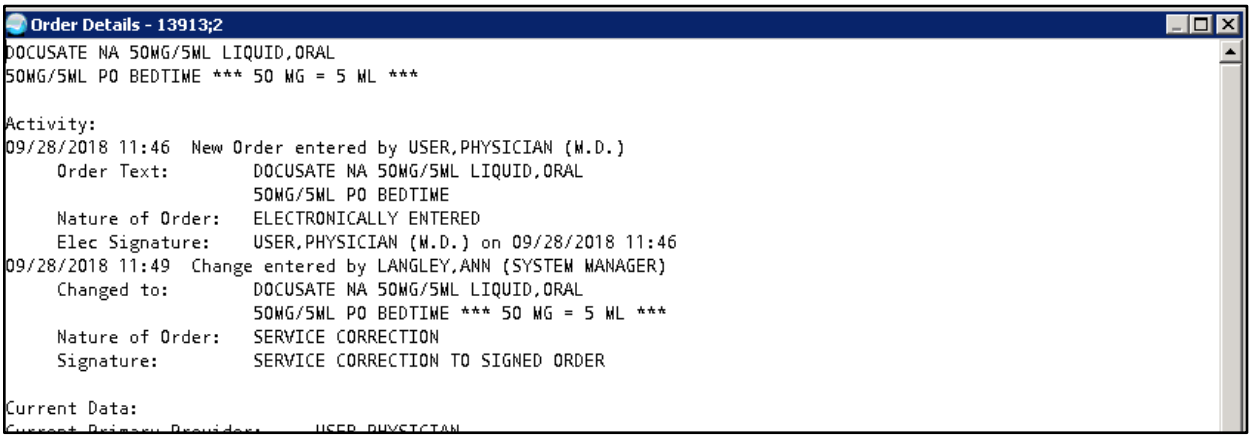


Figure 99: The CareVue Order Details window

Display in BCMA

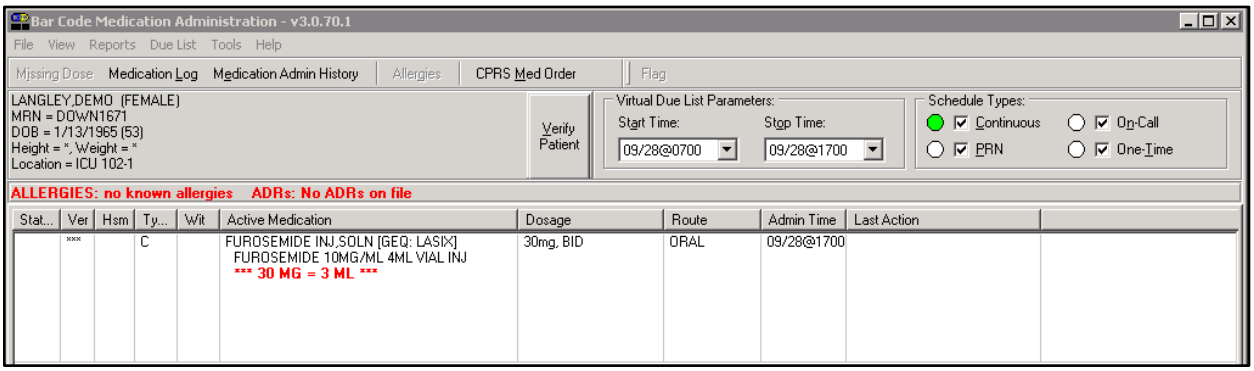


Figure 100: Order Details displayed in BCMA

Required action: Confirm that the MSCPS DISPLAY VOL/DOSE CALC parameter is configured to Y. Test by entering various liquid, injectable and IV additive only orders for medications with both mg and mL values; verify in the Pharmacy application, e.g., Furosemide 40mg/4ml. View in CareVue, PuTTY, Pharmacy labels and BCMA.

Related artifact: 22227

Other Print Info and Special Instructions display

When the MSCPS DISPLAY VOL/DOSE CALC parameter is set to Y, and an entered dose and the associated volume is calculated and displays on medication orders, any associated Other Print Info or Special Instructions text now displays correctly.

Once the order is verified by the Pharmacy application, this calculation and any associated Other Print Info or Special Instructions display in PuTTY, on pharmacy labels, in CareVue order comments and order details, and in BCMA.

Required action: Confirm that the MSCPS DISPLAY VOL/DOSE CALC parameter is configured to Y. Test by entering various liquid, injectable and IV additive only orders with provider comments for medications with both mg and mL values. Verify in the Pharmacy application, e.g., an order for Furosemide 40mg/4ml displays both the volume/dose calculation and the provider comments in CareVue, PuTTY, on pharmacy labels and in BCMA.

Related artifact: 22254

Hyperal IV label prints correct bar code

Hyperal IV orders now print the correct bar code.

Required action: Test in your normal Pharmacy workflow.

Related artifact: 22311

Vitals

Abnormal vital signs flag to notify clinicians

Vital signs entered with a .0 suffix value now flag as abnormal if they are outside of the normal low or normal high range on both the Vitals Review tab and Coversheet.

Required action: Test in your normal vital sign entry workflow.

Related artifact: 21929

Re-selecting a vitals unit no longer changes the vitals value

When using the Units drop-down option on the Vitals entry tab, re-selecting the same unit of measurement from the drop-down before saving no longer causes the vitals value to change.

Required action: Test in your normal vital signs entry workflow on the Vitals tab.

Related artifact: 22132

Patient Data Objects

Patient weight PDO weight conversion rounds to hundredths

The patient weight PHP data object (PDO) now rounds consistently to the hundredths decimal place (two places to the right of the decimal) for weight conversions to match the weight rounding logic in CareVue.

Required action: Test in your normal vitals entry and PDO workflows.

Related artifact: 22226

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Radiology

Ability to charge for contrast on completion of procedure

CareVue Radiology now supports charging for contrast media on the completion of a radiology procedure. When updating exam status using either the CASE No. Exam Edit or MSCRA Processor STATUS UPDATE menu options, users can select the specific contrast media name used during the procedure. The contrast media name choices are determined by the contrast type entered in the CONTRAST MEDIA field above it. Only the contrast media names associated with the chosen contrast media type are available for selection. The contrast media must have a chargemaster number and be present in both the Drug file (50) and the MSC RA Contrast Media Name file to be available.

The following added fields also aid in appropriate documentation of the contrast administered.

- Dose = the amount to be administered in mLs
- Date/Time Dose Administered = current date/time (can be changed)
- Person who Administered = the logged in user (can be changed)
- Needle Gauge = choices in the MSC RA Gauge of Needle file
- Route of Administration = choices in the Radiology Route of Administration file
- Site of Administration = choices in the Radiology Site of Administration file

These new fields are reflected in File 70 RAD/NUC MED PATIENT. as well as on the Results report in CareVue and PuTTY.

Charge and Credit

As with previous functionality, when a procedure is moved to Examined or Complete, depending on the configuration of the MSC RAD CHARGE STATUS parameter, a charge event, charge billed event and HL-7 message are created. Now this action also creates a charge event, charge billed event and HL-7 message for the associated contrast media name, including the dose value in FT1-29.4 of the message.

If procedure status reverts from Examined or Complete, a credit is generated for both the procedure and associated contrast. The user can also perform a manual credit for the procedure and/or contrast.

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```
Select Exam Entry/Edit Menu PMPHARM(GTM) Option: CASE No. Exam Edit

Enter Case Number: 256

Choice Case No.          Procedure                Name                  Pt ID
------ ----------------  ---------                ------------------    ------
 1     030118-256        CT HEAD W/CONT           LANGLEY,SABRINA       600000
974
                         (CT   Detailed) CPT:70460
    PROCEDURE: CT HEAD W/CONT//
    CONTRAST MEDIA USED: YES//
    Select CONTRAST MEDIA: Gastrografin//
      CONTRAST MEDIA NAME: GASTROGRAFIN INJ//
      DOSE ADMINISTERED: 10//
      DATE/TIME DOSE ADMINISTERED: MAR 1,2018@09:33:06
        //
      PERSON WHO ADMINISTERED: LANGLEY,ANN//
      NEEDLE GAUGE: 18
      ROUTE OF ADMINISTRATION: INTRAVENOUS//
      SITE OF ADMINISTRATION: LEFT FOREARM//
    Select CONTRAST MEDIA:
    Select PROCEDURE MODIFIERS:
    Select CPT MODIFIERS:
    CATEGORY OF EXAM: INPATIENT//
    WARD: PSYCH//
    SERVICE: NURSING & REHABILITATIVE//
    BEDSECTION: CARDIAC INTENSIVE CARE UNIT//
    REQUESTING PHYSICIAN: LANGLEY,ANN//
    Select TECHNOLOGIST: RADIOLOGY,TECH//
    TECHNOLOGIST COMMENT: TEST//
    COMPLICATION: NO COMPLICATION//
    PRIMARY CAMERA/EQUIP/RM: CT1//
    Select FILM SIZE:
     ...exam status remains 'EXAMINED'.
```

Figure 101: Case No. Exam Edit

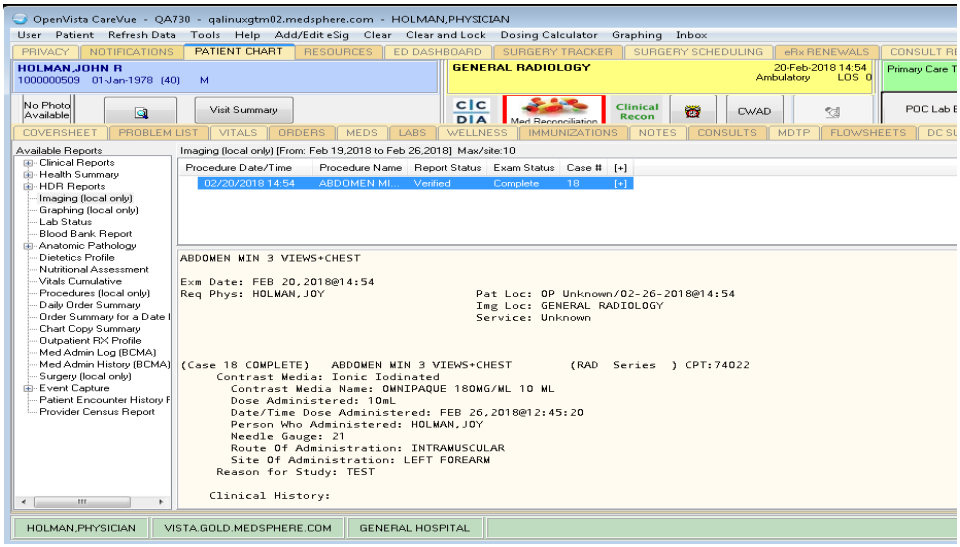

Figure 102: CareVue imaging results

Related artifact: 21604

Credit message generated when backing up a radiology procedure

A credit message is now generated when a radiology procedure reverts from Examined to Waiting for Exam status.

Required action: Test in your normal radiology workflow.

Related artifact: 21670

MSCRA PROCESSOR triggers an HL7 order message at registration

The MSCRA PROCESSOR now triggers an HL7 order message when a patient exam is registered.

Required action: Test using the MSCRA PROCESSOR in your normal radiology order workflow; verify that an HL7 order message is generated when a patient exam is registered.

Related artifact: 21829

Radiology Contrast Media charge sends dose in quantity

Radiology Contrast Media charge messages are now sent with a quantity of 1 in charge segment FT1.10 and the documented dose in segment FT1.11.

Required action: Test in your normal radiology workflow using an exam where contrast is required.

Related artifact: 21796

MSCRA PROCESSOR parent-descendant exams correctly change status

Radiology parent-descendant exams now display correctly in the MSCRA Processor. All descendant exams now shift to COMPLETE status when a report is generated for one case number and configured for a single report.

Required action: Test parent-descendant exam reports in your normal MSCRA PROCESSOR workflow.

Related artifact: 21925

SITE OF ADMINISTRATION field displays during status updates

Sites can now enter either preconfigured or free text in the SITE OF ADMINISTRATION field when updating the status of an exam requiring contrast.

Required action: Test in your normal radiology workflow.

Related artifact: 21928

Radiology inbound and outbound order message updates

Orders Inbound: Users can now accept and display in PuTTY the Department/Modality and Mode of Transport fields when sent in Inbound Order messages. The Department/Modality information is required in segment OBR.19 and includes radiology location abbreviations from file 44. The Mode of Transport is required in segment OBR.30 and includes the Name field from the Radiology Mode of Transport file.

Results Inbound: Users can now accept and display in PuTTY transcriptionist information when sent in Inbound Results messages. This information is required from the sending system in segment OBR.35; the required format is IEN^Name.

Results Outbound: For the Outbound Results interface, the value in segment OBR.2 now includes the order IEN followed by the radiology accession number.

Required action: Test in your normal radiology order inbound and outbound results interface workflows.

Related artifact: 22067

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Complete (CM) status correctly sent for radiology exam HL-7 messages

Correct statuses are now sent for Radiology Exam Order and Exam Status Update HL-7 messages. When a required field is left empty and the exam status is not updated, no message is sent.

Required action: Test in your normal radiology workflow.

Related artifact: 22168

HL7 Complete (CM) message sends after status update

HL7 Complete (CM) messages now send as expected when radiology exam status is updated to EXAMINED.

Required action: Test in your normal radiology workflow. Complete messages should be received by external radiology information systems.

Related artifact: 22216

Order messages send correctly for Parent/Descendant Exams

Order messages now send correctly for each radiology descendant exam when registering a parent/descendant exam using the MSCRA PROCESSOR.

Required action: Test in your normal radiology exam registration process using the MSCRA PROCESSOR.

Related artifact: 22222

CCDA

CCDA and QRDA export processes continue regardless of errors

Both CCDA data export and QRDA file generation are bulk processes that can produce hundreds or thousands of files in a single run. Some of those exports may fail for various reasons, e.g., unforeseen data issues or timeouts. It is important that the export process fail gracefully, recording the record(s) that cannot be written and generating those that can.

A single error from one file that could not be generated no longer halts the entire export. If a single file can't be produced, that data is recorded in the process log file and the rest of the export continues.

Required action: Test in your normal CCDA data export/QRDA file generation process.

Related artifact: 21497

Data export no longer creates CCD files for ancillary visits

The batch export of CCDA files no longer generates files for visits created by ancillary applications, e.g., Radiology or Laboratory. When CCDA files are exported now they are only those with a SERVICE CATEGORY value of AMBULATORY, HOSPITALIZATION or IN HOSPITAL. These three types of visits are typically created by the SISI ADT FILER from ADT messages generated by the patient registration front end. The messages have appropriate data, including an account number, which is incorporated into the resulting CCDA file that represents the visit.

Control the export of CCDA files by editing the CCDA DATA EXPORT CONTROL file in FileMan. Set this file to export all visits within a given time frame or select visits for a single patient. In all cases, whether

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selecting specific visits via the standard FileMan interface or generating automatically based on date/time range, only visits with the appropriate SERVICE CATEGORY (A,H or I) can be exported.

Required action: Create a test data export for selected visits or a brief date range and confirm that exported CCD files correspond to ambulatory or inpatient visits.

Related artifact: 22045

Correcting values for the CCDA patient identifier root OID

A required component of CCDA files is the patient identifier code, which has 'root' and 'extension' components. The root value is set to an object identifier (OID) value of 2.16.840.1.113883.4.1, which indicates that the accompanying extension value is a U.S. Social Security number (SSN). The actual extension value, however, is the patient's medical record number (MRN), which can cause a problem with recipients that reject CCDA files in which the identifier is an SSN. St. Francis Hospital in Tulsa, for example, rejects CCDAs with a patient identifier root of 2.16.840.1.113883.4.1.

This issue is corrected with this release. The default root is now 2.16.840.1.113883.3.274, which is a value unique to Medsphere. The extension is still the patient MRN.

Even with this new default, some recipients of CCDA files may request that the patient ID root have an identifier unique to your organization; they may even provide such an identifier. For such situations, a new XPAR parameter called MSC CDA PATIENT ID ROOT acts as the root of the patient identifier in a CCDA instead of the new default value. For a different patient ID root than 2.16.840.1.113883.3.274, set the MSC CDA PATIENT ID ROOT parameter to your desired value and it will be used as the patient ID root in all CCDA files CareVue creates.

Required action: Test in your normal CCDA generation workflow.

Related artifact: 22110

Orders

Previous clinical indication available when changing an outpatient medication

Users can now change an outpatient medication after the order has been signed without having to choose a clinical indication a second time.

Required action: Test in your normal outpatient medication order workflow.

Related artifact: 21586

Lab quick orders repaired

Users can now create lab quick orders without generating an error.

Required action: Test by creating a new lab quick order and confirming that no error message displays.

Related artifact: 21594

Clinical indications now display in order details

Clinical indications now display in the order details for Labs, Outpatient Meds, Consults and Procedures order types when the BEHOOPRA CLINICAL INDICATOR parameter is set to Optional or Required and a clinical indication has been entered.

Required action: Test in your normal order workflows for the listed order types.

Related artifact: 21650

IV orders display infusion rate on Meds tab

All relevant details, including the infusion rate, display for IV orders in the Meds tab.

Required action: Test in your normal Meds tab workflow.

Related artifact: 21748

Lab clinical indication does not carry over into consult order

A lab clinical indication does not carry over into a consult order when the order is placed after lab orders in the same session.

Required action: Set the BEHOORPA CLINICAL INDICATOR XPAR to NO or null for consults when testing. This artifact specifically relates to consult orders placed after lab orders in the same session while the BEHOOPRA CLINICAL INDICATOR XPAR is set to NO.

Test in your normal workflow for lab and consults orders.

Related artifact: 21793

Manual delayed orders retain correct status after cancel visit ADT message

Manual delayed orders no longer inappropriately update to Pending status before being manually released, which occurred only when a patient was discharged and the discharge was then cancelled from ADT.

Required action: Test by discharging a patient via the ADT interface, then cancel the discharge via the ADT interface. When the patient is showing as admitted again, write delayed orders to be manually released post discharge. Confirm that delayed orders remain in Delayed status until manually released.

Suggested additional testing: Test in your normal delayed order workflow.

Related artifact: 22101

MDTP

MDTP responsive when using a horizontal scroll bar

Text now wraps in the Comments field of MDTP and is visible without the use of a scroll bar.

Required action: Test in your normal MDTP workflow.

Related artifact: 21747

Error message prompts users to remove non-ASCII characters

When saving a comment with non-ASCII characters in MDTP, an error dialog now notifies the user to remove invalid characters before saving the comment.

Required action: Test in your normal MDTP workflow.

Related artifact: 21805

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MDTP Team Members field displays only active users

The MDTP Plan Team Members field now displays only active users by screening out users for whom the DISUSER field in the NEW PERSON file is set to YES.

Required action: Test in your MDTP documentation workflow.

Prerequisite: Set the DISUSER field in the NEW PERSON file to YES for inactive users.

Related artifact: 21969

Laboratory

Use MSC REF LAB AUTO VERIFY option to verify reference lab results

Users can now employ the MSC REF LAB AUTO VERIFY option to verify reference lab results, either manually or tasked.

Required action: Test in your normal lab auto-verify workflow.

Related artifact: 21776

Canceled General lab and Microbiology test display

Previously, when a general lab or microbiology test was canceled or deleted from the accession, the display in CareVue and on lab reports was inconsistent. With this release, a test deleted from an accession displays a Canceled status in CareVue. The order detail also shows the status as Canceled with a reason of Not Performed. On lab reports run in CareVue and PuTTY, these tests also display as Canceled and Not Performed. Tests canceled via the EM (Enter/Verify/Modify data (manual)) option in PuTTY with an asterisk display as Canceled in CareVue and on all CareVue and PuTTY lab reports.

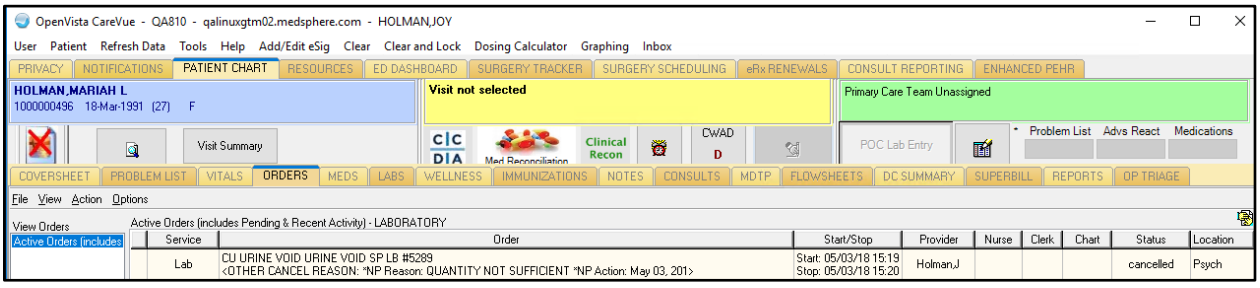

Figure 105: CareVue Orders display

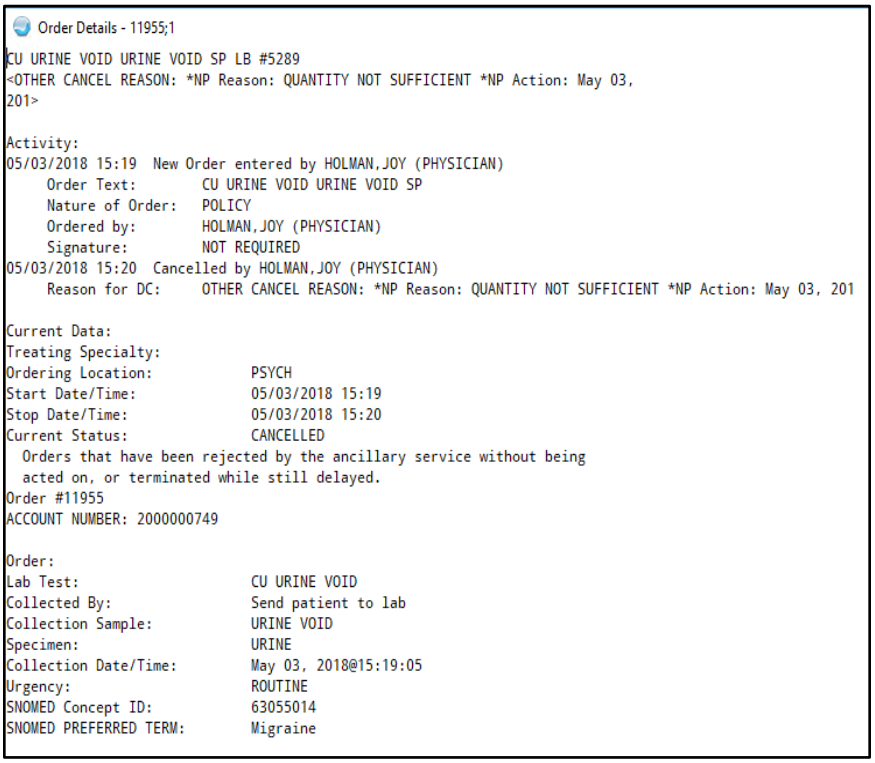

Figure 106: CareVue Order Details display

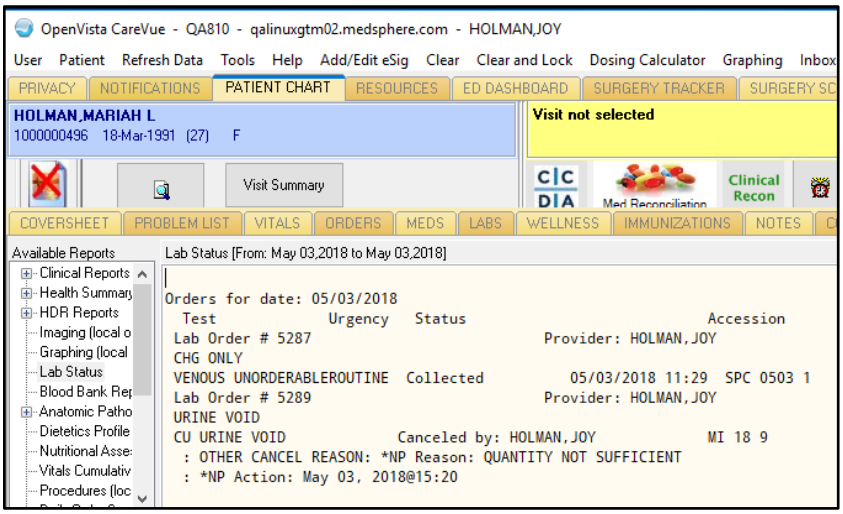

Figure 107: CareVue Lab Status report

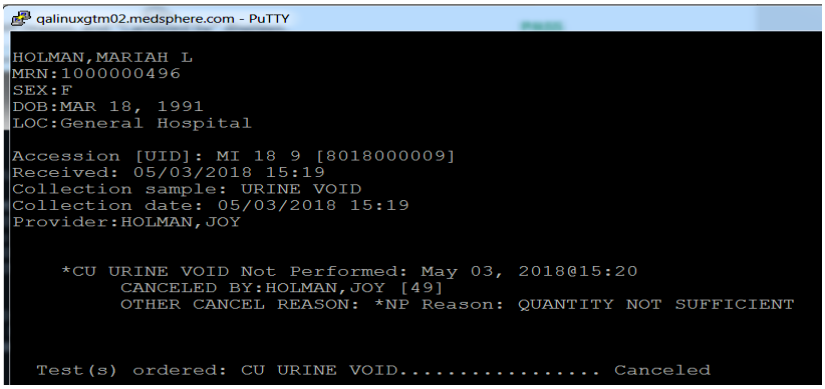

Figure 108: Interim Report

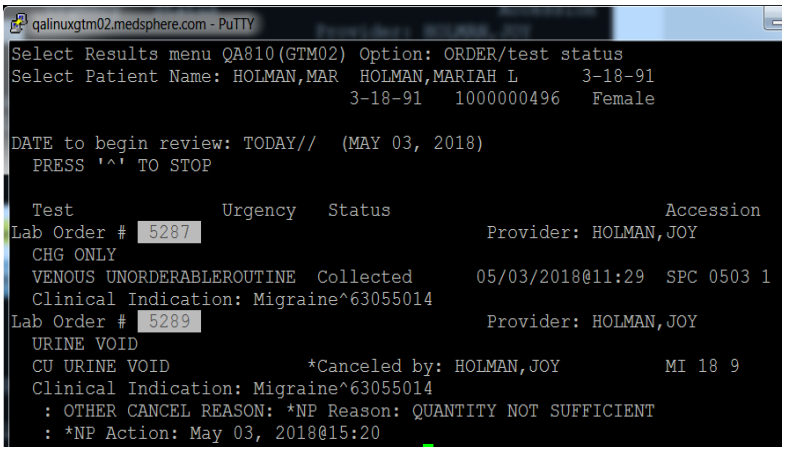

Figure 109: Order/Test Status

Required action: Test in your lab and microbiology order and accession process.

Related artifact: 21120

Print names replace long lab test names with the MSC LAB ALTERNATE REPORTS parameter

Lab test names with more than 18 characters no longer print on the interim report, causing crowding issues with the Result column; instead, the print name displays.

Required action: Test using lab test names with a length of more than 18 characters.

Related artifact: 21763

Microbiology results sent with correct OBR.25 values

Microbiology results are now sent with a P status in message segment OBR.25 if they are preliminary and an F if they are final. Any corrected results are now sent with a C status in OBR.25.

Required action: Test by resulting microbiology results in your normal resulting workflow and examining the resulting outbound HL7 message for correct status.

Related artifact: 22025

Interfaces

Error corrected in CCDA IMPORTER CONTROL file

The CCDA IMPORTER CONTROL file controls the export of CCDA documents to the Patient Portal. CareVue can be configured to populate this file for every patient discharged or based on rules that exclude certain patients. An error prevented population of the CCDA IMPORTER CONTROL file for any patient with internal transfers from one hospital location (ward or clinic) to another. This artifact corrects that error.

Contact mu@medsphere.com for help with automating the import of CCDA files to your patient portal.

Required action: Test in your normal patient transfer or discharge workflow.

Related artifact: 21320

Interfaces/logical links no longer consume increasing amounts of RAM

Interfaces/logical links now shut down automatically if no endpoint is reached.

Required action: Test by noting whether all unused logical links are in Shutdown status in the System Link Monitor.

Related artifact: 21094

Batched immunization files correctly send patient immunizations to registry

Batched immunization files for patients can now be correctly sent to the registry.

Required action: If using the batched immunization setup, confirm that patients with immunizations added, updated, or deleted are sent to the registry. Confirm that each patient in the file reflects what is shown in CareVue on the Immunizations tab.

Related artifact: 21753

ADT protocol updates properly

A patient's primary language, if updated incorrectly, can now be returned to a previous, correct value. The ADT protocol MSC FILE PRIMARY LANGUAGE is now responsive to language update requests.

Required action: Test in your normal ADT process. Change the patient's primary language to an incorrect setting then change back to the correct language.

Related artifact: 22012

Charges

Credit messages include date of charge in FT1.4

Pharmacy credit messages triggered by the PSJI RETURNS, PSJI RETURN BY BARCODE ID and MSCS PHARM CHARGE MANUAL menu options now include a transaction date equal to the date of the earliest uncredited charge for the medication order in FT1.4. In addition, users are notified if the number of units credited is greater than the total number charged when processing manual charges using the MSCS PHARM CHARGE MANUAL menu option.

Required action: Test by charging for IV medications in your normal workflow. The next day, credit these IV medications utilizing the PSJI RETURNS menu option in PuTTY Pharmacy. Check the HL7 messages sent by CareVue and confirm that the FT1.4 field contains the dates of the original charge(s) and not the day the credit was issued.

Repeat the above using the PSJI RETURN BY BARCODE ID menu option for crediting IVs.

Repeat the above for both unit dose and IV orders charges; credit them using the MSCS PHARM CHARGE MANUAL menu option. In addition, attempt to credit more medications units than were charged using the MSCS PHARM CHARGE MANUAL menu option and confirm that this is not allowed.

Related artifact: 20925

ADM charge messages process in CareVue with correct date

Charge and credit messages received from ADM systems that send date/time stamps in 16-digit format for FT1.4 segments of HL7 messages now process correctly; these messages send the correct date/time from CareVue to downstream billing systems.

Required action: In normal workflow procedures, test charges and credits from ADM systems. Confirm that charge messages from CareVue to Mirth have correct charge/credit dates in FT1.4 segments.

Related artifact: 21324

Credit message generates when backing down a radiology procedure

A credit message now generates when walking a radiology procedure back from Examined status to Called for Exam.

Required action: Test in your normal radiology workflow by walking back a radiology procedure.

Related artifact: 21572

FT1-4 transaction date correct on credit messages

For charge on administration locations: When the Undo Given action is completed in BCMA for an earlier medication administration, the resulting credit message contains an FT1.4 segment containing the date of original charge.

Required action: Confirm that a test patient location is set up as charge on administration. Mark that medication order in BCMA as Given. Confirm that a charge message is sent. Wait 24 hours and then edit the Med Log in BCMA and process that administration as Undo Given. Confirm that the resulting credit message has an FT1.4 segment with the original charge date and not the date of credit.

Related artifact: 21608

Charges and credits correct for IV piggyback actions in BCMA

Charges and credits now generate appropriately for actions taken on IV piggyback medications in BCMA.

Required action: For sites using charge on administration (parameter MSCPSBCOA set to YES for system or individual locations): If the MSCPSB CREDIT parameter is set to NOT GIVEN = YES, confirm a credit is generated when using Undo Given in BCMA to reverse a previous Given IVPB administration.

Suggested additional testing: Test in your normal BCMA workflows for charge on administration.

Related artifact: 21641

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ADT

Update for SISIADT filer exception

Messages sent to CareVue with the deceased flag and date populated in PID-29/PID-30 now occur without SISIADT filer exception, and messages continue to process.

Required action: Test in your normal ADT workflow.

Related artifact: 21722

Auto Verification of Lab Results

Auto Verify Reference Lab Data (AV) option accepts results with an alpha character in the UID

Sites using a laboratory unique identifier (UID) containing an alpha character can now use the Auto Verify Reference Lab Data (AV) option to verify lab results.

Required action: If using a UID with alpha character, test in your normal lab auto verification workflow.

Related artifact: 21754

Consults

Consults can be completed in Notes tab

Creating a patient data object named Consults does not affect Consults tab functionality in CareVue.

Required action: Test by completing a Consult from the Notes tab.

Related artifact: 21732

Notes/TIU

TIU reports count Group Notes correctly

The Unsigned/Uncosigned Documents report now counts all unsigned notes separately, instead of counting groups of notes.

Required action: Test in your normal Group Notes workflow.

Related artifact: 21353

Scanning/Imaging

Users click save button just once to attach scanned images

The Imaging Save button is now grayed out (disabled) after clicking once to attach an image.

Required action: Test in your normal image attachment workflow.

Related artifact: 21352

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Reminders

Event date stores correctly when Health Factor or Patient Education is entered

The correct date now stores for Health Factors and Patient Education items when entered via Reminder Dialog.

Required action: Log in as nursing user. Select a patient with inpatient admission no assigned primary provider (will not display in Encounter pane). From the Notes tab, select a note title linked to a reminder dialog for health factors, e.g., MU SMOKING STATUS SCREENING. Finish the reminder dialog template. When prompted, select an encounter provider and sign the note. Switch to the Wellness tab and confirm that the entered health factor has stored with the current date.

Suggested additional testing: Repeat the same test with a note title linked to reminder dialog for patient education topics.

Related artifact: 21535

Bar Code Medication Administration

MSC ADM BCMA report correctly showing ADM credits

Credits issued for the ADM machine now reduce the total ADM dispense count on the ADM & BCMA report. The history of dispenses and credits show on the report for both overrides and dispenses associated with an order.

Required action: Test by issuing ADM dispenses and credits/returns for both overrides and transactions associated with an order. Run the ADM & BCMA report after each dispense and credit/return; verify that the report reflects each action and the total ADM dispense count is accurate.

Related artifact: 21620

Immunizations

NDC codes populate IMMUNIZATION LOT file

The BI LOT NUMBER ADD/EDIT and BI LOT NUMBER NON-MANAGER files now include NDC fields that populate the IMMUNIZATION LOT file. The NDC number is now required for reporting vaccine administrations to most state immunization registries.

Required action: Test in your normal immunization documentation workflow.

Related artifact: 21306

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Meaningful Use Configuration

New XPAR enables Inpatient Quality Reporting program compliance

CMS requires that QRDA files submitted for the hospital Inpatient Quality Reporting (IQR) program contain the CMS certification number for the Certified EHR Technology (CEHRT) used by the submitter. A new parameter allows CareVue users to configure this value when creating QRDA files for submission to QualityNet.org.

Set the MSC QRDA CMS EHR CERT ID XPAR at the system level using a value obtained from the Certified Health IT Product List web site (https://chpl.healthit.gov/#/search). The value configured in this parameter populates the appropriate section of QRDA Category I files created by CareVue R2.

The ID is created by searching for and selecting whatever combination of products you used for Meaningful Use attestation. If you are reporting using a combination of CareVue 1.7 and CareVue R2 and no other products, your Certification ID is 0015HFM7KAS2YJY.

Please see the Certified Health IT Product List site if you have other needs.

Related artifact: 21607

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