

# Special Instructions / Other Print Info and Injection Sites for BCMA v3.0

# **RELEASE NOTES**

PSB\*3\*68

September 2012

Department of Veterans Affairs-Product Development (PD)

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#### 1. Introduction

This document provides a feature summary of the Special Instructions and Other Print Info (SPECIAL INSTRUCTIONS/OTHER PRINT INFO) and Injection Sites functionality for Bar Code Medication Administration (BCMA) v3.0 project, patch PSB\*3\*68.

Installation instructions for PSB\*3\*68 are included in the patch description. See page <u>20</u> of these Release Notes for additional installation details.

- When installing PSB\*3\*68, a second part of the install will immediately begin running in the background and will create a new index for the injection site. This may take 20 to 30 hours to complete.
- After installing the patch, and upon opening BCMA, be sure to expand the last column which is entitled "Last Site." The default is approximately 8 characters, depending on screen resolution, use of capitals or lower case, etc. After you expand the column, BCMA will remember the width each time you log in.

Patches PSB\*3\*58, PSB\*3\*61, PSB\*3\*62, PSS\*1\*171, PSJ\*5\*267 and PSB\*3\*67 must be installed prior to PSB\*3\*68.

#### **Highlights**

- The following dialogs and popups that include Special Instructions/Other Print Info were widened and modified to accommodate unlimited text sent via Inpatient Medications.
  - o Special Instructions/Other Print Info pop-up boxes
  - o Medication Log
  - Unable to Scan
  - Multiple/Fractional Dose
  - o PRN Medication Log
  - o PRN Effectiveness Log
  - o Scan IV
- Title bar for Special Instructions/Other Print Info modified.
- Three methods added to display Special Instructions/Other Print Info on demand for each medication tab.
- New methods added to display Special Instructions/Other Print Info from the Cover Sheet.
- Last Site Column added to the VDL showing the location of the last injection site for the orderable item.

- Expanded Injection Site Needed dialog displays during administration of applicable medications, showing injection site history to assist with injection site rotation.
- Injection Site History dialog added showing the previous injection sites, up to 4, for the orderable item and all injection sites for the patient within the time frame for the parameter selected.

#### **BCMA Reports**

- All reports that contain Special Instructions/Other Print Info were modified to accommodate unlimited text.
- The report dialog boxes of some of the BCMA reports were modified to allow the user to include/exclude Special Instructions/Other Print Info from the reports.

#### **Patient Safety Issue Correction**

• Patient Safety Issues, PSPO 42, 1466, and 2037 resolved with PSB\*3\*68.

#### **BCMA Online Help System Update**

• The Online Help system has been updated for BCMA.

# 2. Special Instructions/Other Print Info Enhancement

Inpatient Medications and BCMA Special Instructions/Other Print Info fields were modified to support an unlimited amount of text. This text is received from the Provider Comments that are entered in the Computerized Patient Record System (CPRS) order entry screen by the provider, and then optionally edited by the Pharmacist in Inpatient Medications. Previously, the Inpatient Medications character length for Special Instructions was 180 characters and for Other Print Info 60 characters.

### 2.1. Virtual Due List (VDL) Modified

Special Instructions/Other Print Info will display on the VDL under the Active Medication. If the total height of the administration row including Special Instructions/Other Print Info is equal to or greater than 19 lines, the following message displays for all three med tabs in place of Special Instructions/Other Print Info (bold red text): "Too much information to display. Use right-click menu to display full text."

Example: VDL Display Hsm | Active Medication Ver Type Dosage NICOTINE 14MG/24HR PATCH PATCH 14MG/24HRS, BID NICOTINE 14MG/24HR PATCH remove and reapply daily at 0900 and NSULIN ASPART,HUMAN 100UNT/ML INJ SLIDING SCALE, Q1H INSULIN ASPART HUMAN 100 UNIT/ML I ALBUTEROL INHL.ORAL 2 PUFFS, TID PRN ALBUTEROL 90MCG (CFC-F) 200D ORAL I. 2 PUFFS 3X DAILY AS NEEDED FOR

# 2.2. Three ways to display Special Instructions/Other Print Info on Each Medication Tab

The following three ways will display Special Instructions/Other Print Info for orders that contain them.

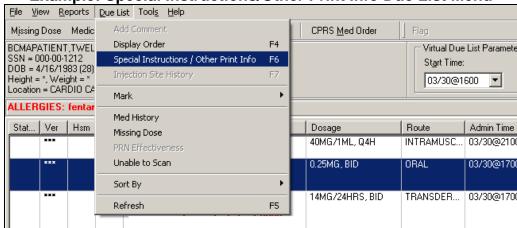
• Special Instructions/Other Print Info Right Click Menu

**Example: Special Instructions/Other Print Info Right Click Menu** 



Special Instructions/Other Print Info Due List Menu

**Example: Special Instructions/Other Print Info Due List Menu** 



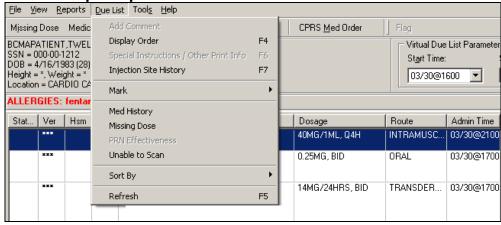
• Special Instructions/Other Print Info Shortcut Function Key (F6)

Example: Special Instructions/Other Print Info Shortcut (F6)



• The above options will be disabled (grayed out) for orders that do not contain Special Instructions/Other Print Info.

**Example: Special Instructions/Other Print Info Disabled** 

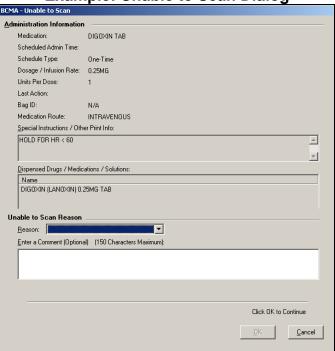


#### 2.3. Dialog Boxes Modified

The following dialog boxes were modified by allowing the Special Instructions/Other Print Info box to expand the full width of the dialog box. A conditional vertical scroll bar and word wrap were added. The vertical height of the Special Instructions/Other Print Info display within the dialog boxes is 6 lines.

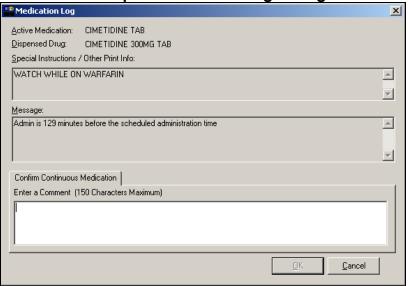
Unable to Scan Dialog

**Example: Unable to Scan Dialog** 



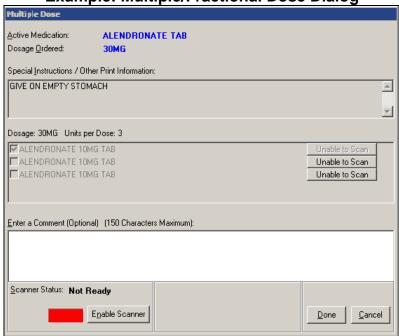
Medication Log Dialog

**Example: Medication Log Dialog** 



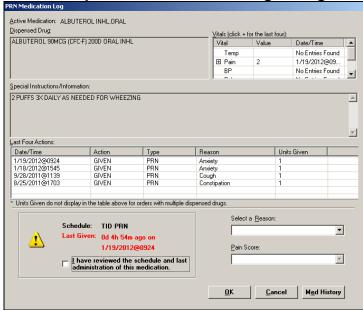
Multiple/Fractional Dose Dialog

**Example: Multiple/Fractional Dose Dialog** 



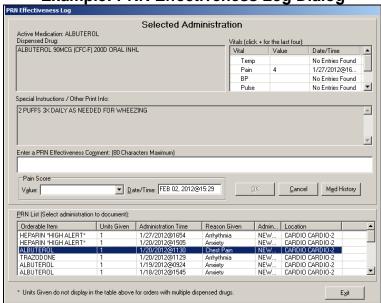
• PRN Medication Log Dialog

**Example: PRN Medication Log Dialog** 

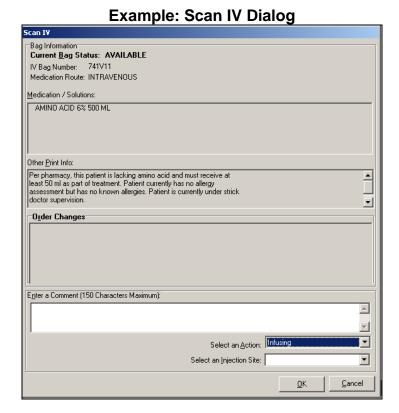


PRN Effectiveness Log Dialog

**Example: PRN Effectiveness Log Dialog** 



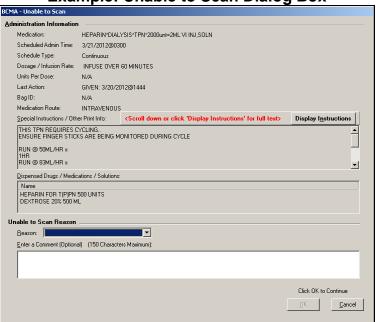
#### Scan IV Dialog



In all of the above dialog boxes, if Special Instructions/Other Print Info text exceeds 6 lines, a scroll bar and "Display Instructions" button appear. The following message displays in bold red text: "<Scroll down or click 'Display Instructions' for full text>." When the "Display Instructions" button is clicked, Special Instructions/Other Print Info will display in the popup.

Following are examples of dialog boxes with Special Instructions/Other Print Info text that exceed 6 lines.

**Example: Unable to Scan Dialog Box** 



**Example: Scan IV Dialog Box** 



#### 2.4. Special Instructions/Other Print Info Pop-Up Boxes Modified

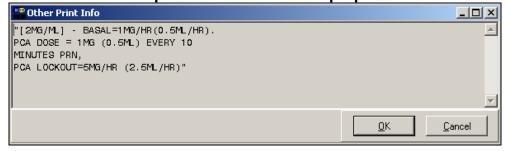
- The title bar of the pop-up for Special Instructions/Other Print Info now reflects the type of information contained in the dialog, Special Instructions or Other Print Info. Special Instructions displays for Unit Dose and IV Push administrations, while Other Print Info display for IVPB and large volume IV medications.
- The default size of the Special Instructions pop-up box is approximately 80 characters wide with a minimum height of 6 lines. The width cannot be changed, and the height will automatically resize to accommodate the length of the message. If the vertical height of the message exceeds the size of the screen, a vertical scroll bar displays.

If the total height of the administration row, including Special Instructions, is equal to or greater than 19 lines, the following message displays in place of Special Instructions (bold red text): "Too much information to display. Use right-click menu to display full text."

**Example: Special Instructions Pop-up Box** 



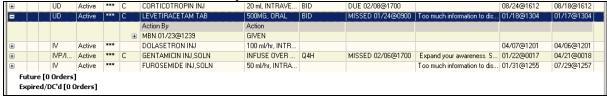
**Example: Other Print Info Pop-up Box** 



#### 2.5. BCMA Cover Sheet Modified

• For orders containing Special Instructions/Other Print Info that exceed 180 characters on the Cover Sheet, the message: "Too much information to display. Use right-click menu to display full text" will be displayed.

**Example: BCMA Cover Sheet** 



• For orders containing Special Instructions/Other Print Info that exceed 180 characters on the Cover Sheet, the hover text message: "Too much information to display. Use right-click menu to display full text" will be displayed while hovering over a Special Instructions/Other Print Info field exceeding 180 characters.

**Example: BCMA Cover Sheet Hover Text** 

		VDL	Status	Ver	Ту	Medication	Dosage, Route	Schedule	Next Action	Special Instructions	Order Start Date	Order Stop
±		UD	Active	×××	Р	TRAZODONE TAB	, ORAL	BID PRN			08/12@1542	02/08@1541
<b>±</b>		UD	Active	xxx	Р	ALBUTEROL INHL,ORAL	2 PUFFS, INHA	TID PRN		2 PUFFS 3X DAILY AS NE	04/07@1157	04/06@1157
		UD	Active	***	C	ACYCLOVIR CAP,ORAL	200MG, ORAL	Q4H	MISSED 11/03@0900		04/14@1124	04/13@1124
<b>=</b>		UD	Active	XXX	C	INSULIN NPH HUMAN (NOVOLI	100 units, SUBC	TID	DUE 02/09@0900	Too much information to dis	01/18@1312	06/16@1312
		UD	Active	XXX	С	ALENDRONATE TAB	30MG, ORAL	Q4H	MISSED 02/07@2100	GIVE ON EMPTY STOMA	06/22@2400	06/22@1635
<b>±</b>		UD	Active	xxx	С	HYDRALAZINE *HIGH ALERT* T	50MG, ORAL	Q4H	MISSED 01/22@0500	Too much information to dis	01/18@1323	07/16@1322
		IVP/I	Active	xxx	С	HYDROMORPHONE*POTENT*R	2MG/1ML, IV P	TID	MISSED 01/22@0900	Too much information to dis	01/22@0016	07/20@0016
<b>±</b>		UD	Active	XXX	С	DIGOXIN TAB NICOTINE 14MG/24HR PATCH P	0.25MG, ORA	nuch info	nucces of poortroo	law Hoo might oli	0710001000	dioplay full to
		UD	Active	xxx	C	NICOTINE 14MG/24HR PATCH P	14MG/24HR57	DID THE	MISSED ODLOS GOSOD	remove and reapply daily ac	onzoeioio	onzieloja luti ce.
±		UD	Active	×××	С	CORTICOTROPIN INJ	20 ml, INTRAVE	BID	DUE 02/08@1700		08/24@1612	08/18@1612

- The following two methods will also display Special Instructions/Other Print Info on the Cover Sheet.
  - o Special Instructions/Other Print Info Right Click Menu

**Example: Special Instructions/Other Print Info Right Click Menu** 

		IVP/I	Active	xxx	С	HYDROMORPHONE*POTENT*R	2MG/1ML, IV P	TID	MISSED 01/22@0900	Too m	nuch information to dis	01/22@0016	07/20@0016
		UD	Active	xxx	C	DIGOXIN TAB	0.25MG, ORAL	BID	MISSED 01/22@1700	H	Available Bags		Ctrl+Alt+V 2
						Action By	Action				Display Order		Ctrl+Alt+O
					+	MBN 01/22@0102	HELD				Special Instructions / Ot		
		UD	Active	xxx	C	NICOTINE 14MG/24HR PATCH P	14MG/24HRS,	BID	MISSED 08/02@0900		Display Reason for Orde		Ctrl+Alt+F 3
<b>±</b>		UD	Active	xxx	С	CORTICOTROPIN INJ	20 ml, INTRAVE	BID	DUE 02/08@1700		Med History		Ctrl+Alt+E 2
<b>±</b>		UD	Active	xxx	С	LEVETIRACETAM TAB	500MG, ORAL	BID	MISSED 01/24@0900	Te	ni <u>c</u> a riistory		4
<b>±</b>		IV	Active	xxx		DOLASETRON INJ	100 ml/hr, INTR				<u>W</u> hat's this?		1
Œ		IVP/I	Active	xxx	C	GENTAMICIN INJ,SOLN	INFUSE OVER	Q4H	MISSED 02/06@1700	Expa	nd your awareness. S	01/22@0017	04/21@0018
<b>±</b>		IV	Active	xxx		FUROSEMIDE INJ,SOLN	50 ml/hr, INTRA			Too m	nuch information to dis	01/31@1255	07/29@1257

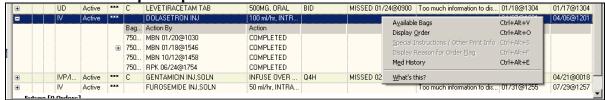
o Special Instructions/Other Print Info Shortcut Key (Alt+Ctrl+S)

Example: Special Instructions/Other Print Info Shortcut Key (Alt+Ctrl+S)



• The above options will be disabled (grayed out) for orders that do not contain Special Instructions/Other Print Info.

**Example: Special Instructions/Other Print Info Disabled** 



#### 2.6. BCMA Reports Modified

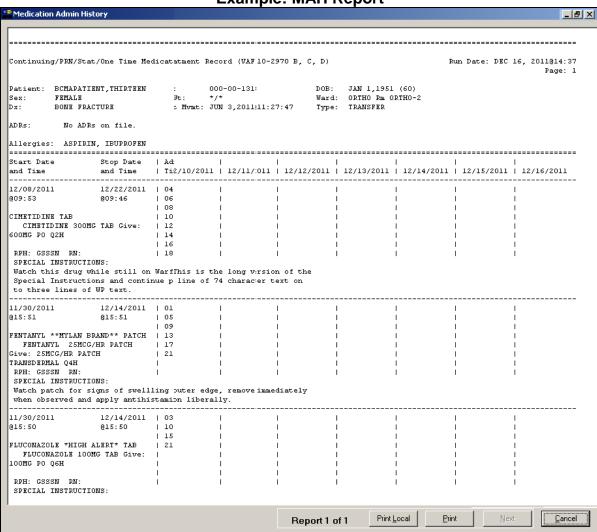
The following BCMA reports were modified to invoke a 74 character word wrap for Special Instructions/Other Print Info to accommodate unlimited text.

- Medication Administration History (MAH) Report
- Display Order Detail Report
- Due List Report
- IV Bag Status Report
- Cover Sheet Report Medication Overview Report
- Cover Sheet Report PRN Overview Report
- Cover Sheet Report IV Overview
- Cover Sheet Report Expired/DC'd/Expiring Report

When printing the MAH report to a printer, if Special Instructions/Other Print Info need to flow to another printed page, a blank line with the message: "CONTINUED ON NEXT PAGE\*\*\*" is printed before the page break. The message: "\*\*\*CONTINUED FROM PREVIOUS PAGE \*\*\*" and a blank line is printed on the subsequent page after the page headers.

Special Instructions was moved below the Initials field and starts on a separate line to allow for wrapping and unlimited text. The field is now entitled "Special Instructions."





The report dialog boxes of the following BCMA reports were also modified to display a checkbox that allows the user to include/exclude SPI/OPI from the reports. The checkbox is unchecked by default, which excludes Special Instructions/Other Print Info from the reports.

- Due List Report
- IV Bag Status Report
- Cover Sheet Report Medication Overview Report
- Cover Sheet Report PRN Overview Report
- Cover Sheet Report IV Overview
- Cover Sheet Report Expired/DC'd/Expiring Report

# 3. Injection Sites Enhancement

BCMA now allows the nurse at the time of medication administration to see the location of up to the last four injection sites for the orderable item, displayed without time limits and all injection site entries for the patient within the time frame (nn) specified by the BCMA Site Parameter, "Injection Site History Max Hours." The default is 72 hours.

#### 3.1. Conditions to enable Injection Site features

The new injection site functionality applies to injectable administrations that participate in injection site rotation. When the following conditions are met, the Last Site column will be populated, Injection Site History options will be enabled, and the expanded Injection Site Needed dialog will display for applicable administrations.

#### **Unit Dose Tab:**

If the administration is on the Unit Dose Tab, and "PROMPT FOR INJ SITE IN BCMA" = YES in the Medication Routes file (#51.2).

#### **IVP/IVPB** Tab:

If the administration is on the IVP/IVPB tab, and

IV TYPE = SYRINGE, subtype INTERMITTENT or

IV TYPE = CHEMOTHERAPY, subtype SYRINGE, subtype INTERMITTENT, and

MEDICATION ROUTE = Intramuscular, Subcutaneous, or Intradermal, and

"PROMPT FOR INJ SITE IN BCMA" = YES, and

"DISPLAY ON IVP/IVPB TAB IN BCMA?" = YES

in the Medication Routes file (#51.2).

# 3.2. "Last Site" column displayed on the BCMA VDL

A new column, "Last Site", was added to the VDL on the Unit Dose and IVP/IVPB tabs, displaying the last injection site that was indicated for the orderable item, for administrations that participate in injection site rotation. The column appears in the last position to the right of the "Last Action" column.

**Example: Last Site Display** 

Stat	Ver	Hsm	Ту	Active Medication	Dosage	Route	Admin Time	Last Action	Last Site
	***		Р	LORAZEPAM INTRAMUSCULAR/IV PUSH INJ LORAZEPAM 2MG IML INJ Severity score / dose >11 give 4 mg 10-11 give 3 MG 8-9 give 2MG 6-7 give 1MG 0-5 0 MG  If score remains >5, obtain order to increase Lorazepam dosing to new scale.	2MG/1ML, Q3H PRN	INTRAMUSC		GIVEN: 2/20/2012@2156	Arm, Left Upper
	xxx		Р	INSULIN ASPART, HUMAN 100UNT/ML INJ INSULIN ASPART, HUMAN 100 UNIT/ML INJ Too much information to display. Use right-click menu to display full text.	SLIDING SCALE, Q1H PRN	SUBCUTAN		GIVEN: 2/20/2012@2142	Abdomen, Left Upper Quad
	***		Р	HEPARIN *HIGH ALERT* INJ, SOLN HEPARIN 5,000 UNITS 0.5ML SYRINGE PER PROTOCOL	10000UNIT/1ML, Q8H PRN	SUBCUTAN		GIVEN: 2/20/2012@2153	Thigh, Left
	xxx		Р	ALBUTEROL INHL, ORAL ALBUTEROL 90MCG (CFC-F) 200D ORAL INHL 2 PUFFS 3X DAILY AS NEEDED FOR WHEEZING	2 PUFFS, TID PRN	INHALATION ORAL		GIVEN: 2/6/2012@1433	

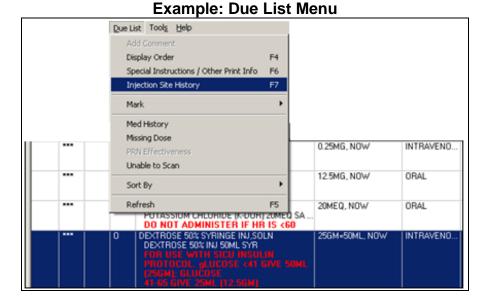
# 3.3. Options to Display Injection Site History

BCMA provides multiple ways to display Injection Site History for administrations that participate in injection site rotation.

• Right-click menu option, "Injection Site History".

**Example: Right-Click Menu** 0 DIGCOON TAB 0.25MG, NOW INTRAVENO. DIGOMN (LANOMN) 0.25MG TAB HOLD FOR HR < 60 ORAL THIORIDAZINE TAB 12.5MG, NOW THIORIDAZINE HCL 25MG TAB HOLD FOR HR < 60 POTASSIUM CHLORIDE SR TAB, SA 20MEQ, NOW ORAL POTASSIUM CHLORIDE (K-DUR) 20MEQ SA DO NOT ADMINISTER IF HR IS <60 EXTROSE 50% SYRINGE INJ,SOLN DEXTROSE 50% INJ 50ML SYR Display Order Special Instructions / Other Print Info F6 Unable to Scan Med History Missing Dose

• Due List menu option, "Injection Site History".



• F7 shortcut option enabled.

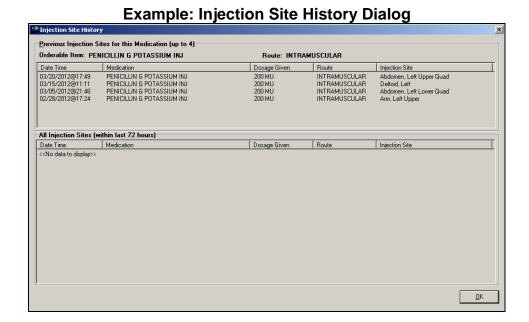
#### 3.4. Injection Site History Dialog

The Injection Site History Dialog displays two tables:

- "Previous Injection Sites for this Medication (up to 4)" shown at the top, lists the last four injection sites for the orderable item displayed without time limits. The name of the Orderable Item and the route are shown above the top table.
- "All Injection Sites (within last nn hours)" shown at the bottom, lists all injection site entries for the patient within the time frame (nn) specified by the BCMA Site Parameter, "Injection Site History Max Hours." The default is 72 hours.

**Note**: If no data exists for the table, the message "<<No data to display>>" appears.

The following fields are displayed in each table: Date Time, Medication (orderable item name), Dosage Given, Route, and Injection Site – sorted in reverse date/time order.



#### 3.5. Expanded Injection Site Needed Dialog

The expanded Injection Site Needed displays during administration of injectable medications when the conditions in section 3.1 are met. The information provided in the following tables will assist the nurse in deciding the location of the next injection site, to ensure proper injection site rotation.

- "Previous Injection Sites for this Medication (up to 4)" shown at the top, lists the last four injection sites for the orderable item displayed without time limits. The name of the Orderable Item and the route are shown above the top table.
- "All Injection Sites (within last nn hours)" shown at the bottom, lists all injection site entries for the patient within the time frame (nn) specified by the BCMA Site Parameter, "Injection Site History Max Hours." The default is 72 hours.

**Note**: If no data exists for the table, the message "<<No data to display>>" appears.

The following fields are displayed in each table: Date Time, Medication (orderable item name), Dosage Given, Route, and Injection Site sorted in reverse date/time order.

#### On the Unit Dose tab:

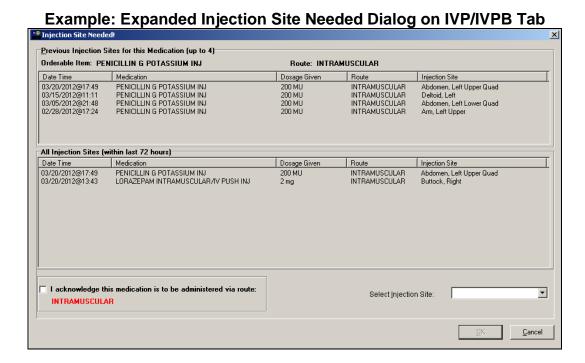
- 1. The user selects the location on the patient where the medication is to be injected from the Select Injection Site drop-down list.
- 2. Click **OK**.

**Example: Expanded Injection Site Needed Dialog on Unit Dose Tab** 



#### On the IVP/IVPB tab:

- 1. In the lower left of the following dialog, a checkbox is displayed with the statement: "I acknowledge this medication to be administered via route:\_\_\_\_\_\_." The medication route is displayed in bold uppercase red text. The OK button remains disabled until the user confirms the acknowledgement statement by checking the checkbox and selecting an injection site.
- 2. The user selects the location on the patient where the medication is to be injected from the Select Injection Site drop-down list.
- 3. Click **OK**.



# 3.6. Multiple Administrations

When multiple administrations are selected, the Injection Site History menu option and corresponding F7 hotkey are disabled (grayed out) on both the Right click menu and the Due List Menu.

# 4. Patient Safety Issue Corrections

The following Patient Safety Issue corrections made with this patch:

- PSPO 42 Special Instructions/Other Print Info too short corrected.
- PSPO 1466 Provider Comments truncated when copying to Special Instructions corrected.
- PSPO 2037 Unable to view all allergies/ADRs for patient on BCMA GUI corrected.

# 5. Defect Fix for Remedy Tickets

The following Remedy Tickets were resolved with this patch:

- HD480879 Multiple Dose Dialog Box "Invalid Medications" popup modified to display whenever an invalid dose is scanned.
- HD488494 BCMA modified to display all Allergies and ADRs for patients with more than one line of Allergies and ADRs.
- HD506938 BCMA modified to always display Patient Record flag in Red.
- HD419658 Special Instructions modified to print in full on Med Overview and PRN Overview Reports

# 6. New Service Requests (NSRs) Resolved

The following NSRs were resolved with this patch:

- 20031205 Equalizing character limits
- 20081003 BCMA Enhancement Injection Sites

# 7. BCMA Online Help Update

The BCMA GUI Online Help system has been updated to include all released BCMA PSB\*3\*68 functionality.

# 8. Installation Details

A post install routine will run to initialize the New Kernel variable, PSB INJECTION SITE MAX HOURS, used for the new Injection Site History functionality in BCMA. This parameter may be changed, after this install, via the BCMA site parameters GUI client, per division, to match site policy. This new parameter will be initialized for all divisions having the Parameter "PSB ONLINE" set to **YES**, as shown below in the Example Install Message.

A second part of the post install procedure, BCMA Injection Site Cross Ref Builder, will be tasked in the background and begin running immediately. This process may take 20-30 hours to complete, depending on your sites BCMA MEDICATION LOG file size. BCMA can be used while this background job is running.

The background job will process the most recent Medical Administration records and work its way back through the BCMA MEDICATION LOG file until complete. The most recent records should be available for the Injection History Window in BCMA, in one to two hours. A MailMan message will be sent to the installer when the background job has completed. See below example.

The background job can be stopped by asking Taskman to stop. A MailMan message will be sent containing the progress of the Cross Ref Builder to that point. This procedure can be restarted later. It will resume where it left off.

The status of this background job can be checked by typing the Mumps command in Programmer Mode, as shown below in the Example Status Check.

The Post Install routine, PSB3P68, should be deleted manually after the MailMan message is received indicating the Cross Ref Builder is complete. See "Post Installation" section in the patch description for instructions on deleting the routine.

```
Example Status Check:
------
UCI>D STATUS^PSB3P68

BCMA Injection Site Cross Ref Builder
Status: RUNNING since Feb 23, 2012@15:42:47
74% complete
```

```
Example Install Message:
_____
 *** PSB*3*68 POST INSTALL NOW RUNNING ***
  Initialize BCMA parameter PSB INJECTION SITE MAX HOURS...
                                    MAX HRS
    DIV
  Before update
    ABC DIVISION
    XYZ DIVISION
  After update
    ABC DIVISION
                                      72
    XYZ DIVISION
                                      72
  BCMA Injection Site Cross Ref Builder
  This request queued as Task # 4957178
```

 ${\tt A}$  MailMan message will be sent to you when the Cross Reference Builder completes.