



BAR CODE MEDICATION ADMINISTRATION (BCMA)

INSTALLATION GUIDE

Version 3.0
February 2004

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Department of Veterans Affairs
VISTA Health Systems Design & Development

Revision History

Date	Patch	Description
12/2023	PSB*3*140	<p>Delphi 11 Upgrade, include ORDERCOM.dll in installation wizard, p 23.</p> <p>Added additional Optional Command Line Parameters SHOWCERTS, /K, and /IHS, p 27.</p> <p>REDACTED p 23</p>
07/2021	PSB*3*106	<p>Added GUI Enhancements for Hazardous to Handle/Disposal of Drug, p 23.</p> <p>REDACTED</p>
5/2021	PSB*3*123	<p>BCMA and BCMA Parameters are being converted to Delphi XE10.4 to make them TRM Compliant, and several reported defects were resolved, p 23.</p> <p>REDACTED</p>
12/2019	PSB*3*101	<p>PSB*3*101 addresses reported defects in BCMA and BCMA parameters applications, p 23</p> <p>REDACTED</p>
5/2019	PSB*3*118	<p>BCMA is being converted to Delphi XE10 and made Windows 10 compatible, p 23</p> <p>REDACTED</p>
12/2018	PSB*3*96	<p>Two-factor authentication (2FA) patch for BCMA is releasing a dll, OrderCom.dll, that is replacing the BCMAOrderCom.dll, p 23</p> <p>REDACTED</p>

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BCMA V. 3.0 and This Guide

Benefits of BCMA V. 3.0



TIP:

The **BCMA Virtual Due List (VDL)** is called “BCMA VDL” in this guide to eliminate confusion with the *VISTA* Documentation Library (VDL) also mentioned in this guide.

This section lists the National Online Information System (NOIS) tickets that are corrected in Bar Code Medication Administration (BCMA) V. 3.0, and provided in the Build description.

1 Problem: NOIS ISB-0603-31561

A medication order that has administration times set for today, but before the Start Time of the order, displays on the Bar Code Medication Administration (BCMA) Due List Report

Corrective Action:

The Due List Report will not display medication orders until the Start Date/Time of the medication order takes affect.

2 Problem: NOIS ISB-0903-31964

When the user selects a time frame for the Medication Administration History (MAH) Report and no administrations are due, the report lists the medication order number from Inpatient Medications V. 5.0 under the “Initial – Name Legend” section.

Corrective Action:

The MAH Report will not display the order number from Inpatient Medications V. 5.0 under the “Initial – Name Legend” section when no administrations are due for a specific time frame.

3 Problem: NOIS LAH-1203-61493

The user receives the following error message, “BCMA failed to communicate with VISTA,” if the Graphical User Interface (GUI) BCMA times out and is unable to connect to the server.

Corrective Action:

The processing time for the GUI BCMA software to display the patient’s record on the BCMA Virtual Due List (VDL) has been reduced.

4 Problem: NOIS LIT-0603-71923

Users sometimes receive an “allocation failure” error message when accessing a patient’s record using the GUI BCMA.

Corrective Action:

The “allocation failure” error message has been corrected.

BCMA V. 3.0 and This Guide

Benefits of BCMA V. 3.0 (cont.)

- 5 Problem:** NOIS MAD-1203-42204
The MAH Report takes an extended amount of time to run if the Start Date and the Stop Date of the report, requested by the user, are for different years. For example, if the Start Date is 12/28/03 and the Stop Date is 01/03/04.

Corrective Action:

The user can now request different years for the MAH Report without experiencing extended delays as BCMA accesses the data.

- 6 Problem:** NOIS MIN-1203-41637
Users sometimes experience an “Invalid Medication Lookup” error message after scanning a medication in the “Scan Medication Bar Code:” field of the “Order Manager” dialog box when using the BCMA Med Order Button in GUI BCMA.

Corrective Action:

The BCMA medication lookup process has been corrected to properly validate the medications scanned in the “Scan Medication Bar Code:” field of the “Order Manager” dialog box in GUI BCMA.

- 7 Problem:** NOIS UNY-0104-10174
Multiple IV medication orders display as merged on the IV Medication Tab after an order is discontinued, but the IV bag is still infusing.

Corrective Action:

Multiple IV medication orders will display properly on the IV Medication Tab.

- 8 Problem:** NOIS TNV-0104-30647
Users sometimes experience the following error message, “ERROR: 16^Server Protocol Disabled,” when using the Edit Medication Log [PSB MED LOG EDIT] option. This occurs when the PSB BCMA RAS017 SRV Health Level Seven (HL7) server protocol is being disabled.

Corrective Action:

The error message is only intended to notify the BCMA software that the protocol is being disabled. BCMA will now validate the message and not display it to users.

BCMA V. 3.0 and This Guide

Benefits of BCMA V. 3.0 (cont.)

9 **Problem:** NOIS ISB-0104-31384

When an IV medication order with an infusing bag is “Renewed,” the renewed order continues to display on the IV Medication Tab of the BCMA VDL until the infusing bag is “Completed,” even if the “Renewed” order’s Start Date/Time has expired.

Corrective Action:

When an IV medication order with an infusing bag is “Renewed,” the renewed order will continue to display on the IV Medication Tab of the BCMA VDL until the infusing bag is “Completed,” or until the Start Date/Time of the new order that was created during the renewal process. Once the new order is active, the infusing bag from the previous order will display on the BCMA VDL with the new order, along with any additional bags created from the new order. Any available bags from the previous order will display on the new order based on the IV Site Parameter settings in the GUI BCMA Site Parameters application.

BCMA V. 3.0 and This Guide

Benefits of BCMA V. 3.0 (cont.)



TIP:

BCMA is designed to augment, not replace, the clinical judgment of the medication administrator, or clinician.



TIP:

You can double click on the PRN Effectiveness Activity in the BCMA Clinical Reminders marquee to document ALL PRN medication orders needing effectiveness documentation.

This section provides an overview of the major changes in the Bar Code Medication Administration (BCMA) V. 3.0 software such as the new routines and files, Phase Release changes, and maintenance fixes. This version also includes enhancements, which are a direct result of feedback from the BCMA Workgroup and our many end users, and included in Phase Releases I-IV.

Patient Transfer Notification Message

The Patient Transfer Notification Information message displays when you open a patient's record, or view the Unit Dose or the IVP/IVPB Medication Tab for the first time. It indicates that the patient has had a movement type (usually a transfer) within the Patient Transfer Notification Timeframe site-definable parameter, and the last action for the medication occurred before the movement, but still within the defined timeframe.

You can define this site parameter, by division, with a minimum value of 2 and a maximum value of 99. The default is 72 hours.

Note: The display of the message is dependent on the last action displayed in the "Last Action" column of the BCMA VDL. BCMA then evaluates the last action performed on a medication each time the Unit Dose or the IVP/IVPB Medication Tabs are refreshed.

Documenting Fractional Dose Orders

You can document Fractional Dose medication orders on the Unit Dose and the IVP/IVPB Medication Tabs. This functionality alerts you when dispensed drug dosages need to be administered to a patient in "fractional" doses so you can provide comments about this order type once administered. The Fractional Dose dialog box displays when the units per dose is fractional and *less than* 1.0. The Multiple/ Fractional Dose dialog box displays when the units per dose is *greater than* 1.0.

Note: If you do not scan once for each unit listed in the Multiple/Fractional Dose dialog box, the Confirmation dialog box displays requesting that you confirm the actual total units administered.

BCMA Clinical Reminders Marquee

Located in the lower, right-hand corner of the BCMA VDL, this "marquee" identifies Pro Re Nata (PRN) medication orders needing effectiveness documentation. The setting is based on the PRN Documentation site-definable parameter, and applies to current admissions or to the site parameter timeframe (whichever is greater). Values can be set from 1-999, with 72 hours the default setting. A "mouse-over" list, in the PRN Effectiveness Activity area, provides the four most recent PRN orders that need comments.

Benefits of BCMA V. 3.0 (cont.)

PRN Documentation Site Parameter

The PRN Documentation site parameter lets you define the minimum number of hours from NOW that BCMA will search for PRN medication orders needing effectiveness comments. The four most recent PRN orders that need documentation display within the PRN Effectiveness mouse-over list in the “BCMA Clinical Reminders” marquee, located in the lower, right-hand corner of the BCMA VDL.

The allowable entry for this parameter, definable by division, is a minimum value of 1 and a maximum value of 999. The default is 72 hours.

Include Schedule Types Site Parameter

You can automatically display PRN medication orders when the BCMA VDL is first opened by selecting the PRN check box in the “Include Schedule Types” area of the GUI BCMA Site Parameters application. This parameter controls the default display of PRN medications on the BCMA Character-based User Interface (CHUI) Due List and the BCMA VDL — even if you change the Schedule Types or Medication Tab during a medication pass.

Your medical center can choose to have the PRN Schedule Types display on the BCMA VDL by default, or to display PRN medications once a clinician selects the PRN Schedule Type check box on the BCMA VDL. All other Schedule Types will display by default and cannot be changed.

Accessing PRN Effectiveness Log

You can quickly access the PRN Effectiveness Log dialog box by selecting a medication on the BCMA VDL, and then selecting the PRN Effectiveness command from the Right Click drop-down menu.

The PRN Effectiveness Log displays the patient’s medication information at the top of the box, under the Selected Administration area, and all PRN medication administrations in the PRN List table. Once a medication is selected, the “Selected Administration” area of the dialog box populates with administration information. The Med History button on the dialog box displays the Medication History Report for the orderable item listed in the “Selected Administration” area of the dialog box.

BCMA V. 3.0 and This Guide

Benefits of BCMA V. 3.0 (cont.)



TIP:

Discontinued and expired orders, with a Stop date/time greater than 72 hours from NOW, will not display on the VDL even if an infusing or stopped bag exists on the order.

Schedule Type Indicator Alert Lights

In the Schedule Type area of the BCMA VDL, a **GREEN** “alert light” indicates that a medication order exists for the Schedule Type selected within the respective start/stop date and time selected on the BCMA VDL. If grayed out, then none exist.

Medication Log Dialog Box

The Medication Log dialog box includes the Vitals area, which displays the four previous vitals entries for each of the Vital signs listed in the area. The “+” (plus) sign, to the left of a Vital sign, expands the row to reveal additional entries. The “-” (minus) sign collapses the row to hide all, but the most recent entry.

PRN Effectiveness Dialog Box

The PRN Effectiveness dialog box includes the Vitals area, which displays the four previous vitals entries for each of the Vital signs listed in the area. The “+” (plus) sign, to the left of a Vital sign, expands the row to reveal additional entries. The “-” (minus) sign collapses the row to hide all, but the most recent entry.

Scan IV Dialog Box

The “Bag Information” title/area at the top of the Scan IV dialog box has been replaced with “IV Bag #.” BCMA populates this area with pertinent information about the IV bag selected on the BCMA VDL. The “Other Print Info” title has been replaced with “Order Changes,” which now displays changes to an IV order, which have an Infusing or Stopped IV bag.

Bag Information Column on VDL

This new column on the BCMA VDL identifies an IV order that currently has an IV bag with a status of Infusing or Stopped. It also identifies orders that have changed since the Infusing or Stopped IV bag was first infused.

BCMA V. 3.0 and This Guide

Benefits of BCMA V. 3.0 (cont.)

Report Printing

Here's the changes to the report printing functionality in BCMA V. 3.0:

- **Medication Administration History (MAH) Report:** The Date column lists three asterisks (***) to indicate that a medication is not due. This information is also noted in the Legend at the bottom of the MAH Report.

The report also includes information about when an order is placed "On Hold" and taken "Off Hold" by a provider, and the order Start and Stop Date/Time for the medication.

- **Medication Variance Report:** Provides "exceptions" (variances) to the medication administration process. It also lists "event" information within a selected date range, such as the type and number of events, and the total percentage of events that occurred. A variance preceded by a minus sign (such as -24) indicates the number of minutes that a medication was given before the administration time.
- **Cumulative Vitals/Measurement Report:** Lists a patient's vitals from the Vitals package, along with their demographics and hospital location information. You cannot print this report by ward.
- **Ward-Specific Reports:** Simply click CANCEL at the Patient Lookup dialog box to access the Menu Bar — without opening a patient record — and print ward-specific reports only, except for the Cumulative Vitals/Measurement Report. A patient's file must be opened to access patient-specific reports.
- **Missed Medications Report:** Indicates when a medication order is placed "On Hold" and taken "Off Hold" in CPRS or Inpatient Medications V. 5.0. The Hold information is provided below the medication information on the report, and only applies to administrations due within the Hold timeframe.

The "Order Num" column on the report lists the actual order number and order type (i.e., Unit Dose or IV). This information is quite helpful when troubleshooting problems with BCMA.

- **CHUI Missing Dose Report:** Changed the line item "Dosage Schedule" on the BCMA CHUI Missing Dose Report to "Schedule" to coincide with the Missing Dose E-mail Notification change described on the next page.

BCMA V. 3.0 and This Guide

Benefits of BCMA V. 3.0 (cont.)

HL7 Messaging

BCMA V. 3.0 supports “Health Level Seven (HL7),” a standard package (*VISTA* Messaging) used with M-based applications for conducting HL7 transactions. This package provides the facilities to create, transmit, and receive HL7 messages over a variety of transport layers. BCMA only exports HL7 messages.

Missing Dose E-Mail Notification

The e-mail notification that is sent from BCMA to the Pharmacy, when you submit a Missing Dose Request, now includes “Schedule” information.

Documenting PRN Pain Scores

With BCMA V. 3.0, you can perform the following tasks with regards to documenting PRN pain scores:

- **Define Items:** In the “Reason Medication Given PRN” default Answer Lists of the GUI BCMA Site Parameters application you can identify those items that will require the documentation of a pain score within BCMA. The pain score will be documented and stored in the Vitals package.
- **Select a Pain Score:** When documenting an administration for a PRN medication, you can select a pain score from a pre-defined list.
- **Access a Pain Score:** When documenting the effectiveness for a PRN medication, you can access pain score information for the patient.

Benefits of BCMA V. 3.0 (cont.)

Administering a Multiple Dose Order

If you do not scan once for each Unit Dose or IVP medication listed in the Multiple Dose dialog box, BCMA displays the Confirmation dialog box informing you to scan additional units. The Multiple Dose dialog box retains the data that you entered before receiving the message.

Administering a PRN Order

In the Medication Log dialog box, you can select the patient's pain score, between 0 and 10 or 99, with "0" being No Pain, "10" the Worst Imaginable, and "99" for "Unable to Respond."

Recording the Effectiveness of a PRN Medication

In the PRN Effectiveness Log dialog box, you can select the patient's pain score, between 0 and 10 or 99, with "0" being No Pain, "10" the Worst Imaginable, and "99" for "Unable to Respond."

Creating Default Answers Lists

In the GUI BCMA Site Parameters application, the Attribute column is available only when you choose the Default Answer Lists Tab and select the "Reason Medication Given PRN" list. This column identifies that a Pain Score is required from the patient when a clinician administers a specific medication.

When you select the "Requires Pain Score" check box when adding or renaming a "Reason Medication Given PRN" item, you must choose a pain score in the BCMA Medication Log and PRN Effectiveness dialog boxes when administering a medication.

BCMA V. 3.0 and This Guide

Benefits of This Guide

Preparing your site for the installation and implementation of BCMA V. 3.0 helps to ensure a smooth integration. This Installation Guide is designed to help you do just that. It includes detailed information such as system requirements; installation time estimates and instructions; and procedures that will get you up and running quickly with BCMA V. 3.0.

Our Target Audience

We have developed this guide for the following individuals, who are responsible for installing, supporting, maintaining, and testing this package.

- Development Engineering
- Information Resources Management (IRM)
- Clinical Application Coordinator (CAC) – called Applications Package Coordinator (ADPAC) at some sites
- Enterprise VISTA Support (EVS)
- Software Quality Assurance (SQA)

Other Sources of Information



TIP:

Bookmark these sites for future reference.

Refer to the Web sites listed below when you want to receive more background and technical information about BCMA V. 3.0, and to download this manual and related documentation.

Background/Technical Information

From your Intranet, enter **REDACTED** in the Address field to access the BCMA Main Web page.

This Manual and Related Documentation

From your Intranet, enter <http://www.va.gov/vdl> in the Address field to access this manual, and those listed below, from the VISTA Documentation Library (VDL).

- Technical Manual/Security Guide
- GUI User Manual
- Nursing CHUI User Manual
- Pharmacy CHUI User Manual
- Manager's User Manual

BCMA V. 3.0 and This Guide

Documentation Retrieval Process



TIP:

Bookmark these sites for future reference.

Your site can retrieve the BCMA V. 3.0 documentation listed below from the following FTP addresses. The preferred method is to “FTP” the files from **REDACTED**. This location automatically transmits files from the first available FTP Server to the appropriate directory on your system. (See the order listed below under the FTP Address column).

Note: If you prefer, you can retrieve the software *directly* from one of the FTP Servers, listed below, under the FTP Address column.

Example: FTP Addresses Available for Downloading BCMA V. 3.0 Documentation

OI Field Office	FTP Address	Directory
REDACTED	REDACTED	REDACTED
REDACTED	REDACTED	REDACTED
REDACTED	REDACTED	REDACTED

Example: BCMA V. 3.0 Documentation and Related File names

BCMA V. 3.0 Documentation	Documentation File name
Installation Guide	PSB_3_IG_R0204.PDF
Technical Manual/Security Guide	PSB_3_TM_R0204.PDF
GUI User Manual	PSB_3_UM_Chapters 1 through 4_R0204.PDF PSB_3_UM_Chapters 5 through 8_R0204.PDF PSB_3_UM_Appendix A_(FAQs)_R0204.PDF PSB_3_UM_Appendix B_(Index)_R0204.PDF
Nursing CHUI User Manual	PSB_3_UM_NURSE_CHUI_R0204.PDF
Pharmacy CHUI User Manual	PSB_3_UM_PHAR_CHUI_R0204.PDF
Manager’s User Manual	PSB_3_UM_MGR_R0204.PDF

Conventions Used in This Guide



TIP:

In a CHUI environment, when you press **ENTER**, instead of typing a response, the system accepts the default value shown to the left of the double slash (//) at a prompt or a field.

Before installing BCMA V. 3.0, review this section to learn the many conventions used throughout this guide.

- **Keyboard Responses:** Keys provided in **boldface**, within the steps, help you quickly identify what to press on your keyboard to perform an action. See the examples provided below.
- **Within the Steps: At the “Select Kernel Installation & Distribution System Option:” prompt, type **INSTALL**, and then press **ENTER**.**
- **Within Screen Captures: Text in boldface, centered between arrows on screen captures, identifies the key you must press for the system to capture your response or to move the cursor to the next field. See the following example.**

```
DEVICE FOR QUEUED JOB OUTPUT: <Enter>
```

- **Mouse Responses:** Buttons provided in **boldface**, within the steps, indicate what you should click on your computer screen using the mouse. For example, when you see **NEXT**, **YES/NO**, or **OK** in the steps, click the appropriate button on your computer screen.
- **User Responses:** Information presented in **boldface**, within steps or shaded screen captures, indicate what you should “type” (enter) onto your computer screen. See the examples provided below.
- **Within the Steps: At the “Select OPTION NAME:” prompt, type **XPD MAIN** and then press **ENTER**.**
- **Within Screen Captures: See the following example.**

```
RESCHEDULING FREQUENCY: 1M
```

- **Screen Captures:** Provide “shaded” examples of what you will see on your computer screen, and possible user responses.
- **Notes:** Provided within the steps, describe exceptions or special cases about the information presented. They reflect the experience of our staff, developers, and testers.

BCMA V. 3.0 and This Guide

Conventions Used in This Guide (cont.)



TIP:

In a CHUI environment, you can exit a menu option by typing a caret (^), then pressing **ENTER**. A caret is sometimes called Up-Arrow.

- **Tips:** Located in the left margin, these helpful hints are designed to help you work more efficiently with BCMA V. 3.0.
- **Menu Options:** When provided in *italics*, identifies a menu option. When provided in **boldface**, ALL CAPS, identifies the letters that you should type onto your computer screen, before pressing **ENTER**. The system then goes directly to the menu option. (**Note:** The letters do not have to be entered as capital letters, even though they are provided within the steps in this format.) See the examples provided below.
 - **Italicized:** Use the Kernel *First Line Routine Print* [XU FIRST LINE PRINT] option to print a list containing the first line of every PSB routine.
 - **Capitalized:** At the “Taskman Management Option:” prompt, type **SCHED**ule/Unschedule Options, and then press **ENTER**.

BCMA V. 3.0 and This Guide

Obtaining On-line Help

On-line help is designed right into the Graphical User Interface (GUI) and Character-based User Interface (CHUI) versions of BCMA V. 3.0, making it quick and easy for you to get answers to your questions. Here's how to access help in both versions of BCMA V. 3.0:

- **GUI BCMA:** Provides context-sensitive, on-line help and the Help menu.
 - ✓ **Context-Sensitive Help:** Place your “focus” on a feature, button, or Tab on the BCMA VDL, using the **TAB** key, and then press **F1** to receive help specific to that area of the BCMA VDL. In the case of a command, first highlight it in the Menu Bar or Right Click drop-down menu, and then press **F1**.
 - ✓ **Help Menu:** Open the Help menu, and then choose the Contents and Index command to receive help for every feature in GUI BCMA V. 3.0.
- **CHUI BCMA:** Lets you enter up to two question marks at any prompt to receive on-line help.
 - ✓ **One Question Mark:** Provides a brief statement related to the prompt.
 - ✓ **Two Question Marks:** Displays more detailed information about the prompt, plus any hidden actions.

Locating Detailed Listings

You can obtain and print listings about BCMA V. 3.0 routines, and Data Dictionaries using the information provided below.

Routines

Use the Kernel routine XINDEX to produce detailed listings of routines. Use the Kernel *First Line Routine Print* [XU FIRST LINE PRINT] option to print a list containing the first line of every PSB routine.

Data Dictionaries

You can use the VA FileMan *List File Attributes* [DILIST] option, under the *Data Dictionary Utilities* [DI DDU] option, to print the Dictionaries.

Pre-Installation Information

Minimum Required Packages

Before installing BCMA V. 3.0, make sure that your system includes the following Department of Veterans Affairs (VA) software packages and versions (those listed or higher).

Example: Minimum Required Packages and Versions

Package	Minimum Version Needed
Inpatient Medications	5.0
Kernel	8.0
MailMan	8.0
Nursing	4.0
Order Entry/Results Reporting	3.0
Pharmacy Data Management	1.0
RPC Broker (32-bit)	1.1
Toolkit	7.3
VA FileMan	22.0
Vitals/Measurements	5.0

Installation Time Estimates



IMPORTANT:

You should install and test BCMA in your test accounts **before** installing in your production accounts.

On average, it takes approximately two minutes to install BCMA V. 3.0. This estimate was provided by a few of our BCMA V. 3.0 Beta Test sites. Actual times may vary, depending on how your site is using its' system resources.

Suggested time to install: non-peak requirement hours. During the install process, PC Client users should not be accessing the Client Software.

Pre-Installation Information

Resource Requirements



TIP:

The approximate size for ^PSB was calculated using a “normal” medication pass for a Unit Dose and an IV medication order. This is only an estimated number; it serves as the “mean.”

This section summarizes the (approximate) number of resources required to install BCMA V. 3.0.

- Routines 60
- Globals 1 (^PSB)
- Files 5 (53.66-53.79)
- ^PSB Size (in bytes) Unit Dose = 300 x # of Medications Administered
IV = 2100 x # of IV Bags Administered
- FTEE Support .2
- FTEE Maintenance .2

Response Time Monitor

BCMA V. 3.0 does not include Response Time Monitor hooks.

Laptops and Bar Code Scanners

The approximate requirements for laptops and bar code scanners depend on the number of Inpatient areas, at your site, that use BCMA V. 3.0 for administering active medication orders. The BCMA Development Team recommends that your site have a minimum of three laptops and three scanners for each ward.

Printers

Your site should provide printers for creating patient wristbands and medication bar code labels, and for handling Missing Dose Requests sent from BCMA V. 3.0 to the Pharmacy.

Unit Dose Label Printer Devices

BCMA V. 3.0 includes the *Label print* [PSBO BL] option for printing individual or batch Unit Dose bar code labels. It is specifically coded to the Zebra-brand printers using the Zebra Programming Language (ZPL). Model 105SE was used in the development of the labels. Routine PSBO BL uses site-specific printers or terminals to produce labels.

IV Label Printer Devices

Inpatient Medications V. 5.0 provides a menu option for printing individual or batch IV bar code labels. See the section “Interfacing with the Bar Code Label Printer” in the *Inpatient Medications V. 5.0 Technical Manual/Security Guide* for detailed setup information.

Pre-Installation Information

Client PC Setup Requirements

Once all BCMA V. 3.0 files are installed, make sure that every Client PC includes the minimum system *before* users run BCMA V. 3.0 from it. BCMA must be installed via an account that has Administrative privileges.

For specific Client PC Setup Requirements, see the “VA Standard Desktop Configurations” link below, which provides the current corporate software and hardware configurations per VA Directive 6401.

REDACTED

Files Required to Run BCMA V. 3.0



TIP:

The namespace for the BCMA package is PSB and the primary global is ^PSB.

BCMA V. 3.0 uses the following files installed on the *VISTA* Server. “Journaling” is recommended.

- ^PSB (53.66, BCMA IV Parameters
- ^PSB (53.68, BCMA Missing Dose Request
- ^PSB (53.69, BCMA Report Request
- ^PSB (53.78, BCMA Medication Variance Log
- ^PSB (53.79, BCMA Medication Log

Note: You can learn more about these files by generating a list with file attributes using VA FileMan

Pre-Installation Information

Routines Installed

Review the listing below to learn the routines installed on to your site's *VISTA* Server during the installation of BCMA V. 3.0. The first line of each routine briefly describes its general function.

Note: You can use the *Kernel First Line Routine Print* [XU FIRST LINE PRINT] option to print a list containing the first line of each PSB routine.

Routine Mapping

At this time, we do *not* offer any recommendations for routine mapping. However, if you choose to map the BCMA V. 3.0 package routines, you will need to bring your system down, and then restart it to load the new routines into memor

Example: BCMA V. 3.0 Routines Installed on to VISTA Server

```
PSBALL PSBAPIPM PSBCHIVH PSBCHKIV PSBMD PSBML PSBML1 PSBMLN
PSBMLN1 PSBMLHS PSBMLTS PSBMLU PSBMLVAL PSBO PSBO1 PSBOAL
PSBOBL PSBODL PSBODL1 PSBODO PSBOHDR PSBOMD PSBOMH PSBOMH1
PSBOMH2 PSBOML PSBOMM PSBOMV PSBOPE PSBOPI PSBOPM PSBOVT
PSBOWA PSBPAR PSBPARIV PSBPOIV PSBPRN PSBRPC PSBRPC1 PSBRPC2
PSBRPC3 PSBRPCMO PSBRPCXM PSBSAGG PSBSVHL7 PSBUTL PSBVAR PSBVDLIV
PSBVDLPA PSBVDLPB PSBVDLTB PSBVDLU1 PSBVDLU2 PSBVDLU3 PSBVDLUD PSBVDLVL
PSBVITFL PSBVT PSBVT1 PSBXMRG
```

60 routines

Pre-Installation Information

Routines with Related Checksums

This section lists the routines and related checksums for BCMA V. 3.0 provided during the installation process.

Example: BCMA V. 3.0 Routines with Related Checksums

```
Select BUILD NAME: PSB 3.0      BAR CODE MED ADMIN

PSBALL value = 1475151
PSBAPIM value = 9031085
PSBCHIVH value = 1166996
PSBCHKIV value = 35513271
PSBMD value = 17319681
PSBML value = 23421797
PSBML1 value = 7074072
PSBMLN value = 18077803
PSBMLN1 value = 9220985
PSBMLHS value = 2525483
PSBMLTS value = 8100734
PSBMLU value = 1498988
PSBMLVAL value = 9734944
PSBO value = 17926200
PSBO1 value = 2876667
PSBOAL value = 1806300
PSBOBL value = 4045534
PSBODL value = 16589922
PSBODL1 value = 8836828
PSBODO value = 2948451
PSBOHDR value = 5286664
PSBOMD value = 6143174
PSBOMH value = 20105393
PSBOMH1 value = 20721307
PSBOMH2 value = 9443664
PSBOML value = 10399745
PSBOMM value = 21442785
PSBOMV value = 13276146
PSBOPE value = 7022505
PSBOPI value = 288600
PSBOPM value = 4855752
PSBOVT value = 790819
PSBOWA value = 13904863
PSBPAR value = 6032995
PSBPARIV value = 16437954
PSBPOIV value = 24363099
PSBPRN value = 7079605
PSBRPC value = 10743383
PSBRPC1 value = 5473533
PSBRPC2 value = 20110546
PSBRPC3 value = 194738
```

Pre-Installation Information

Example: BCMA V. 3.0 Routines with Related Checksums (cont.)

```
PSBRPCMO value = 18080428
PSBRPCXM value = 2728593
PSBSAGG value = 1431404
PSBSVHL7 value = 16217830
PSBUTL value = 14185290
PSBVAR value = 4760179
PSBVDLIV value = 17858201
PSBVDLPA value = 4059667
PSBVDLPB value = 19523684
PSBVDLTB value = 3557813
PSBVDLU1 value = 18022165
PSBVDLU2 value = 4610568
PSBVDLU3 value = 3001261
PSBVDLUD value = 18568646
PSBVDLVL value = 23162182
PSBVITFL value = 2483832
PSBVT value = 22976876
PSBVT1 value = 767427
PSBXMGRG value = 1576759
```


Installation Information

VISTA Server Installation Instructions



IMPORTANT:

You should install and test BCMA in your test accounts **before** installing in your production accounts.



TIP:

Performing the steps in this section will help to ensure that GUI BCMA runs smoothly from a Client PC.

Perform the steps provided below to download BCMA V. 3.0 from an FTP Server. Then you will be ready to use this section for loading the Kernel Installation & Distribution System (KIDS) Distribution file and the Broker Server file, and for installing BCMA V. 3.0 on to the VISTA Server.

Attention: BCMA V. 3.0 includes a new GUI executable file. Installation of this GUI is NOT required immediately after the KIDS install for the software to function. The installation process will make significant changes to routines, files, and files within the BCMA V. 3.0 application. Review the bulleted list below, taken from the Build description, for more information.

- Prior clients compatible with BCMA V. 3.0: 2.0.36.14
- Client can be copied instead of installed: Yes

Task 1: Download BCMA V. 3.0 Software

Use the following information to download BCMA V. 3.0 from an FTP Server.

- 1 Download the GUI BCMA file PSB3_0.exe, the Host File PSB_3_0.KID from an FTP Server using an address listed in the table below.
 - The preferred method is to “FTP” the files from **REDACTED**. This location automatically transmits files from the *first* available FTP Server. (See the order listed below under the FTP Address column).
- **.EXE or .PDF files need to be FTP in BINARY.**
- **KIDS Build needs to be FTP in ASCII.**

Note: If you prefer, you can retrieve the software *directly* from one of the FTP Servers, listed below, under the FTP Address column.

- 2 Move the files to the appropriate directory on your system.

Example: FTP Addresses Available for Downloading BCMA V. 3.0 Software

OI Field Office	FTP Address	Directory
REDACTED	REDACTED	REDACTED
REDACTED	REDACTED	REDACTED
REDACTED	REDACTED	REDACTED

Installation Information

VISTA Server Installation Instructions (cont.)

Task 2: Load the KIDS Distribution File

Perform the steps listed below to load the KIDS Distribution file.

- 1 Sign in to the UCI where the KIDS Distribution file will be loaded and BCMA V. 3.0 will be installed.
- 2 At the “Select OPTION NAME:” prompt, type **XPD MAIN**, and then press **ENTER**.
- 3 At the “Select Kernel Installation & Distribution System Option:” prompt, type **INSTALLation**, and then press **ENTER**.
- 4 At the “Select Installation Option:” prompt, type **Load a Distribution**, and then press **ENTER** to prepare for loading the KIDS Distribution file.
- 5 At the “Enter a Host File:” prompt, type **the directory where you have stored the Host File**, followed by **PSB_3_0.KID**. Then press **ENTER**.
- 6 At the “Want to Continue with Load YES//?” prompt, press **ENTER**. The system then loads the file to this location.

Task 3: Install BCMA V. 3.0

Now you are ready to install BCMA V. 3.0 on to the VISTA Server. Suggested time to install: non-peak requirement hours. During the install process, PC Client users should not be accessing the Client Software.

Note: You should perform step #1 listed below *now* if you are planning to install BCMA V. 3.0 immediately. However, if you are installing the application at another time, ask users to log off your system at that time.

- 1 From the Facility Tab of the GUI BCMA Site Parameters application, take BCMA users offline.
- 2 Request that all BCMA users log off BCMA.
- 3 Review mapped sets for PSB* namespaces.
 - If the routines are mapped, remove them from the mapped set at this time.
- 4 Backup your system. This step is optional, but recommended.
- 5 At the “Select INSTALL NAME:” prompt, type PSB 3.0 and then press **ENTER** to install BCMA V. 3.0. This Build provides all of the routines and files necessary for BCMA V. 3.0.

Installation Information

VISTA Server Installation Instructions (cont.)

Task 3: Install BCMA V. 3.0 (cont.)

- 6 At the “Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES//” prompt, type **NO**, and then press **ENTER**.
- 7 At the “Want KIDS to INHIBIT LOGONs during the install? YES//” prompt, type **NO**, and then press **ENTER**.
- 8 At the “Want to DISABLE Scheduled Options, Menu Options, and Protocols? YES//” prompt, type **NO**, and then press **ENTER**.
- 9 At the “DEVICE:” prompt, press **ENTER** to use the default device HOME (the screen) for printing the Installation message. If you want to print a hard copy, enter your site printer, and then press **ENTER**.
- 10 If routines were unmapped as part of the installation process, return them to the mapped set once the installation of BCMA V. 3.0 is completed.
- 11 From the Facility Tab of the GUI BCMA Site Parameters application, place BCMA V. 3.0 back on-line.

Additional Preparation for BCMA V. 3.0

Now you are ready to perform the steps listed below to further prepare your site and staff for using BCMA V. 3.0.

- 1 If you are a Micronectics Standard MUMPS (MSM) site, move the PSB routines only, to all nodes.
- 2 Assign the following security keys to appropriate site personnel.
 - **PSB MANAGER** – designates the holder as a manager
 - **PSB INSTRUCTOR** – designates the holder as a nursing instructor supervising student nurses
 - **PSB STUDENT** – designates the holder as a student nurse, requiring that an instructor also sign on to BCMA V. 3.0 at the same time
 - **PSB CPRS MED BUTTON** – designates the holder as a nurse who can document administered verbal- and phone-type STAT and NOW orders using the CPRS Med Order Button on the BCMA V. 3.0 VDL

Working with GUI BCMA V. 3.0

Client PC Setup Requirements

Once all BCMA V. 3.0 files are installed, make sure that every Client PC includes the minimum system configuration *before* users run BCMA V. 3.0 from it. BCMA must be installed via an account that has Administrative privileges.

For specific Client PC Setup Requirements, see the “VA Standard Desktop Configurations” link below, which provides the current corporate software and hardware configurations per VA Directive 6401.

REDACTED

Client Distribution Files

This section lists the Client files distributed during the installation of BCMA V. 3.0. Note: the file list has been updated to reflect current file versions releasing with PSB*3.0*140.

Example: Client Files Distributed During BCMA V. 3.0 Installation

File names	Description	File Version	Kilobytes
BCMA.exe	Main BCMA application	3.0.140.2	8,856
BCMA.chm	BCMA help file		1,180
OrderCom.dll	CPRS Med Order Button, Dynamic Link Library (DLL)	2.0.18.3	4,614
BCMApar.exe	GUI BCMA Site Parameters Application	3.0.140.2	5,266
BCMApar.chm	Site Parameter help file		161
ReadMe.txt	Supplementary Information		8

Note: The BCMAOrderCom.dll was replaced with the OrderCom.dll file released in PSB*3.0*96. With the release of PSB*3.0*96 you can remove all instances of the BCMAOrderCom.dll file. Also, ROBOEX32.DLL is no longer needed or distributed.

Working with GUI BCMA V. 3.0

Standard Installation Procedure for GUI BCMA V. 3.0



TIP:

You can use BCMA V. 3.0 to upgrade an earlier version of BCMA, or you can install BCMA V. 3.0 without previous versions being installed.

Use the instructions listed below to install the GUI version of BCMA V. 3.0, on a Client PC.

To install GUI BCMA V. 3.0 on a Client PC

- 1 Locate the directory where you downloaded the GUI BCMA V. 3.0 file PSB_3_0P140 via FTP, and then double click on the file to launch the InstallShield Wizard.
- 2 Click **YES** at the message, "Would you like to install BCMA?"
- 3 At the InstallShield Wizard Welcome screen, click **NEXT**.
- 4 Read the contents of the BCMA Installation screen, and then click **NEXT**.
- 5 Click **NEXT** at the Choose Destination Location screen.
 - a. Click **BROWSE** if you want to locate another folder to replace the default destination folder. Once located and selected, click **NEXT** to proceed with the installation process.
- 6 At the Setup Type screen, select one of the following choices, and then click **NEXT** to continue with the installation process. "Typical" is the default installation.
 - **Typical** – Installs only the BCMA Client program, which is necessary for using BCMA V. 3.0 to perform the medication administration process.
 - **Full** – Installs the BCMA Client program, and the GUI BCMA Site Parameters application.
 - **Custom** – Lets you select which programs (i.e., BCMA Client program or GUI BCMA Site Parameters application) that you want to install.
- 7 At the InstallShield Wizard Complete screen, click **FINISH** to complete the BCMA installation process. BCMA V. 3.0 is now installed on to the PC.

Working with the Hosts File on the Client PC



TIP:

Users *must* have FULL read/write access to the BCMA directory on the Client PC that they're using.



TIP:

You *must* have at least one space between the address and the name. Do *not* put any spaces in the name.

Make sure that every Client PC has a link established between the Client PC and the *VISTA* Server via the Hosts file on the PC — *before* running GUI BCMA V. 3.0 from a Client PC. Then you can set up the Optional Command Line Parameters using the table provided in the next section.

Where your Hosts file (no extension) is located, depends on your system. For example:

- **Microsoft Windows 10** –
C:\Windows\System32\drivers\etc.

➤ **If No Hosts File Exists**

If the Hosts file does not exist, create one. (Your system may already contain a sample file called “hosts.sam.”) If you create the file using Notepad, it will automatically save the file with a .txt extension. You can use Microsoft Windows File Explorer to rename the file without an extension.

➤ **If the Hosts File Exists**

If the Hosts file already exists, do not delete anything. Just add the new information (i.e., the address and the name) at the end of the file. See the examples provided below.

- **If a user only needs access to one BCMA Server and the ServerPort is 9200**, add one line to the Hosts file. Use the IP address provided by your Server Administrator. See the example provided below.

152.111.222.333 BrokerServer

- **If the user only needs to access one BCMA Server and the ServerPort is *not* 9200**, add one line to the Hosts file as shown in the example provided above. Then use the table in the next section to set up the Optional Command Line Parameters.
- **If the user needs to access multiple BCMA Servers and/or the ServerPort is *not* 9200**, add the BCMA Server names to the Hosts file. (The names can be anything you like.) See the examples listed below. Then use the table in the next section to set up the Optional Command Line Parameters.

152.111.222.333 BrokerServer1
152.222.333.444 BrokerServer2

Working with GUI BCMA V. 3.0

Setting up Optional Command Line Parameters

Use the table provided below to set up the Optional Command Line Parameters. The order that you set up each Parameter is up to your site. However, each Parameter must be continuous, without any spaces.

Note: If Parameters “S” and “P” are set, they must both be present, or the Client PC will ignore them

Example: Set up for Optional Command Line Parameters

Parameter	Example (default)	Description
S=	S=BrokerServer	The name of the BCMA Broker Server, as defined in the Hosts file. The default is “BrokerServer.”
P=	P=9200	The server port used by the BCMA Broker Server. The default is “9200.”
L=	L=C:\Temp	The DOS path location for the BCMA Error Log file. Any DOS path will work. The default is “C:\Temp.”
T=	T=300	RPC Broker TimeOut in seconds. This is the amount of time that BCMA V. 3.0 will wait for a response from an RPC on VISTA . If it is not defined, the default value is five minutes. The minimum value is 30 seconds; anything less is ignored. If the VISTA System's CPU utilization is near 100 percent, and frequent timeouts occur in the GUI version of BCMA V. 3.0, you can increase this value. NOTE: The higher the value, the longer BCMA V. 3.0 will appear to hang until the RPC Broker call is complete.
/NOLOGFILE		This parameter disables the Error Log.
/DEBUG		This parameter turns on (displays) the BCMA Debug screens.
-S -A -S		Silent install. These command line parameters only work on the distribution file. For example: PSB2_0P24.exe -s -a -s The silent install will only install the GUI BCMA application, and will not install the GUI BCMA Site Parameters application. At this time, a silent un-install does not exist.
SHOWCERTS		This will prompt the application to display a certificate selection screen.
/K	/K=500	This overrides the default timer value in the BCMA desktop shortcut as follows: you can add /K= and a time value in milliseconds, for example: /K=500.
/IHS		Turns on SetIHS which forces BCMA to use IHS mode as though running in an RPMS system.

Working with the Monthly SAGG Report

Setting up the Monthly Batch Job



TIP:

You can use FORUM to view your monthly SAGG Report.



TIP:

In step #7, ### is the number of the entry.



TIP:

See the next page to view the set up of a monthly SAGG Report.

Use the steps listed below to set up your system to run the Monthly Statistical Analysis of Global Growth (SAGG) Report.

Note: You do not need to perform the steps listed below if you have already set up the Monthly SAGG Report.

To set up the monthly batch job

- 1 At the Programmer's prompt, type **D ^XUP**, and then press **ENTER** to access the menu option for setting up your Monthly SAGG Report.
- 2 At the "Select OPTION NAME:" prompt, type **EVE**, and then press **ENTER**.
- 3 From the list of choices, select Systems Manager Menu, and then press **ENTER**.
- 4 At the "Select Systems Manager Menu Option:" prompt, type **TASK**man Management, and then press **ENTER**.
- 5 At the "Select Taskman Management Option:" prompt, type **SCHED**ule/Unschedule Options, and then press **ENTER**.
- 6 At the "Select OPTION schedule or reschedule:" prompt, type **PSB SAGG MONTHLY REPORT**, and then press **ENTER**.
- 7 At the "Are you adding 'PSB SAGG MONTHLY REPORT' as a new OPTION SCHEDULING (the ###)? No//?" prompt, type **Yes**, and then press **ENTER**. The Edit Option Schedule screen displays.
- 8 At the "QUEUED TO RUN AT WHAT TIME:" prompt, type a **date and time when you want the report to run**, in a VA FileMan format. Then press **ENTER** to move to the next prompt.
- 9 At the "DEVICE FOR QUEUED JOB OUTPUT:" prompt, press **ENTER** (leave this prompt blank).
- 10 At the "QUEUED TO RUN ON VOLUME SET:" prompt, type **the volume set (CPU)** to use for running the monthly batch job. Then press **ENTER** to move to the next prompt.
- 11 At the "RESCHEDULING FREQUENCY:" prompt, type **1M** to run the report on a monthly basis. Then press **ENTER** to move to the next prompt.
- 12 At the "TASK PARAMETERS:" prompt, press **ENTER** (leave this prompt blank).
- 13 At the "SPECIAL QUEUEING:" prompt, press **ENTER** (leave this prompt blank).
- 14 At the "COMMAND:" prompt, type **S** to save the settings, and then press **ENTER**. Your report will print on the same day and time each month (until you specify otherwise).
- 15 At the "COMMAND:" prompt, type **E** to exit the Edit Option Schedule screen.

Working with the Monthly SAGG Report

Setting up the Monthly Batch Job (cont.)

The following example illustrates the set up process for running the SAGG Monthly Report at your site.

Example: Set up for SAGG Monthly Report

```
>D ^XUP

Setting up programmer environment
Terminal Type set to: C-VT320

Select OPTION NAME: EVE
  1  EVE      Systems Manager Menu
  2  EVENT CAPTURE DATA ENTRY ECENTER   Event Capture Data Entry
  3  EVENT CAPTURE MANAGEMENT MENU ECMGR   Event Capture Management Menu
  4  EVENT CAPTURE MENU ECMENU   Event Capture Menu
  5  EVENT CAPTURE ONLINE DOCUMENTA ECDSONL   Event Capture Online
Documentation

Press <RETURN> to see more, '^' to exit this list, OR
CHOOSE 1-5: 1 EVE      Systems Manager Menu

Select Systems Manager Menu Option: TASKman Management

Select Taskman Management Option: SCHEDule/Unschedule Options

Select OPTION to schedule or reschedule: PSB SAGG MONTHLY REPORT   Monthly
SAGG Report
...OK? Yes// <Enter>
```

Working with the Monthly SAGG Report

Setting up the Monthly Batch Job (cont.)

The example provided below illustrates the prompts (fields) to complete on the Edit Option Schedule screen for running the PSB SAGG Monthly Report at your site.

Example: Set up for SAGG Monthly Report (cont.)

```

      Edit Option Schedule
Option Name: PSB SAGG MONTHLY REPORT
Menu Text: Monthly SAGG Report          TASK ID:

-----

QUEUED TO RUN AT WHAT TIME: <Date, time to run the report>
DEVICE FOR QUEUED JOB OUTPUT: <Enter>
QUEUED TO RUN ON VOLUME SET: <Volume set (CPU)>
RESCHEDULING FREQUENCY: 1M
TASK PARAMETERS: <Enter>
SPECIAL QUEUEING: <Enter>

-----

Exit   Save   Next Page   Refresh
Enter a command or '^' followed by a caption to jump to a specific field.

COMMAND: S          Press <PF1>H for help  Insert
COMMAND: E          Press <PF1>H for help  Insert
```

Glossary

Learning BCMA V. 3.0 Lingo

The alphabetical listing, in this section, is designed to familiarize you with the many acronyms and terms used throughout this guide.

Example: Alphabetical Listing of BCMA V. 3.0 Acronyms and Terms

Acronym/Term	Definition
Broker Server	The M portion of the RPC Broker within the VA's Veterans Health Information Systems and Technology Architecture (VISTA) environment.
CHUI	Character-based User Interface.
Client	An architecture in which one computer can get information from another. The Client is the computer that asks for access to data, software, or services.
CPRS	Computerized Patient Record System. A VISTA software application that allows users to enter patient orders into different software packages from a single application. All pending orders that appear in the Unit Dose and IV packages are initially entered through the CPRS package. Clinicians, Managers, Quality Assurance Staff, and Researchers use this integrated record system.
Data Dictionary	Also called "DD," the dictionary that contains file attributes.
FileMan	The VISTA database management system.
FTEE	Full Time Equivalent Employee.
GUI	Graphical User Interface. The type of interface chosen for BCMA V. 3.0.
IV	A medication given intravenously (within a vein) to a patient from an IV bag. IV types include Admixture, Chemotherapy, Hyperal, Piggyback, and Syringe.
Journaling	A record of changes made in files and messages transmitted. It is quite useful when recovering previous versions of a file before updates were made, or to reconstruct updates if an updated file gets damaged.
KIDS	Kernel Installation & Distribution System.
MSM	Micronectics Standard MUMPS.
MUMPS	Massachusetts General Hospital Utility Multi-Programming System.
PRN Order	The Latin abbreviation for Pro Re Nata . A medication dosage given to a patient on an "as needed" basis.
PSB CPRS MED BUTTON	The name of the security "key" that must be assigned to nurses who document verbal- and phone-type STAT and NOW (One-Time) medication orders using the CPRS Med Order Button on the BCMA VDL.
PSB INSTRUCTOR	The name of the security "key" that must be assigned to nursing instructors, supervising nursing students, so they can access user options within BCMA V. 3.0.

Glossary

Learning BCMA V. 3.0 Lingo

The alphabetical listing, in this section, is designed to familiarize you with the many acronyms and terms used throughout this guide.

Example: Alphabetical Listing of BCMA V. 3.0 Acronyms and Terms

Acronym/Term	Definition
PSB MANAGER	The name of the security “key” that must be assigned to managers so they can access the PSB Manager options within BCMA V. 3.0.
PSB STUDENT	The name of the security “key” that must be assigned to nursing students, supervised by nursing instructors, so they can access user options within BCMA V. 3.0. This key also requires that a nursing instructor sign on to BCMA.
RPC	Remote Procedure Call. A procedure stored on the VISTA Server, which is executed to return data to the Client.
RPC Broker	A Client/Server System within the VA’s Veterans Health Information Systems and Technology Architecture (VISTA) environment. It enables client applications to communicate and exchange data with M Servers.
Security Keys	Used to access specific options within BCMA V. 3.0 that are otherwise “locked” without the security key. Only users designated as “Holders” may access these options.
Server	An architecture in which one computer can get information from another. The Server, which can be anything from a personal computer to a mainframe, supplies the requested data or services to the Client.
VDL	Virtual Dose List. An on-line “list” used by clinicians when administering active medication orders (i.e., Unit Dose, IV Push, IV Piggyback, and large-volume IVs) to a patient. This is the Main Screen in BCMA V. 3.0. Note: This is called BCMA VDL in this guide to eliminate confusion with the VISTA Documentation Library (VDL) also mentioned in this guide.
VISTA	Veterans Health Information Systems and Technology Architecture.
ZPL	Zebra Programming Language.

APPENDIX A: Sample KIDS Load & Installation

```
>D ^XUP

Setting up programmer environment
Terminal Type set to: C-VT320

Select OPTION NAME: XPD MAIN      Kernel Installation & Distribution System

Select Kernel Installation & Distribution System Option: INSTALLation

Select Installation Option: ?

  1  Load a Distribution
  2  Verify Checksums in Transport Global
  3  Print Transport Global
  4  Compare Transport Global to Current System
  5  Backup a Transport Global
  6  Install Package(s)
     Restart Install of Package(s)
     Unload a Distribution

Select Installation Option: 1 Load a Distribution
Enter a Host File: PSB_3_0.KID

KIDS Distribution saved on Jan 22, 2004@06:00:58
Comment: BAR CODE MED ADMIN V3

This Distribution contains Transport Globals for the following Package(s):
  PSB 3.0
Distribution OK!

Want to Continue with Load? YES// <Enter>
Loading Distribution...

  PSB 3.0
Use INSTALL NAME: PSB 3.0 to install this Distribution.
```

APPENDIX A: Sample KIDS Load & Installation

```
Select Installation Option: ?

1   Load a Distribution
2   Verify Checksums in Transport Global
3   Print Transport Global
4   Compare Transport Global to Current System
5   Backup a Transport Global
6   Install Package(s)
    Restart Install of Package(s)
    Unload a Distribution

Select Installation Option: 6 Install Package(s)

Select INSTALL NAME: PSB 3.0    Loaded from Distribution 1/22/04@06:44:48
=> BAR CODE MED ADMIN V3 ;Created on Jan 22, 2004@06:00:58

This Distribution was loaded on Jan 22, 2004@06:44:48 with header of
BAR CODE MED ADMIN V3 ;Created on Jan 22, 2004@06:00:58
It consisted of the following Install(s):
    PSB 3.0
Checking Install for Package PSB 3.0

Install Questions for PSB 3.0

Incoming Files:

53.66  BCMA IV PARAMETERS
Note: You already have the 'BCMA IV PARAMETERS' File.

53.68  BCMA MISSING DOSE REQUEST
Note: You already have the 'BCMA MISSING DOSE REQUEST' File.

53.69  BCMA REPORT REQUEST
Note: You already have the 'BCMA REPORT REQUEST' File.

53.78  BCMA MEDICATION VARIANCE LOG
Note: You already have the 'BCMA MEDICATION VARIANCE LOG' File.

53.79  BCMA MEDICATION LOG
Note: You already have the 'BCMA MEDICATION LOG' File.

Want KIDS to Rebuild Menu Trees Upon Completion of Install? YES// NO

Want KIDS to INHIBIT LOGONs during the install? YES// NO
Want to DISABLE Scheduled Options, Menu Options, and Protocols? YES// NO

Enter the Device you want to print the Install messages.
You can queue the install by enter a 'Q' at the device prompt.
Enter a '^' to abort the install.

DEVICE: HOME//  GENERIC INCOMING TELNET

Install Started for PSB 3.0 :
    Jan 22, 2004@06:45:58
```

APPENDIX A: Sample KIDS Load & Installation

Build Distribution Date: Jan 22, 2004

Installing Routines:

Jan 22, 2004@06:45:59

Installing Data Dictionaries:

Jan 22, 2004@06:46

Installing PACKAGE COMPONENTS:

Installing SECURITY KEY

Installing FORM

Installing HL LOGICAL LINK

Installing HL7 APPLICATION PARAMETER

Installing PROTOCOL

Installing REMOTE PROCEDURE

Installing LIST TEMPLATE

Installing OPTION

Installing PARAMETER DEFINITION

Installing PARAMETER TEMPLATE

Jan 22, 2004@06:46:05

Updating Routine file...

Updating KIDS files...

PSB 3.0 Installed.

Jan 22, 2004@06:46:06

Install Message sent #160672

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100% | 25 50 75 |
Complete +-----+