

BAR CODE MEDICATION ADMINISTRATION (BCMA)

**TECHNICAL MANUAL/SECURITY GUIDE**

# Version 3.0

February 2004

(Revised October 2009)

Department of Veterans Affairs Office of Enterprise Development

Each time this manual is updated, the Title Page lists the new revised date and this page describes the changes. If the Revised Pages column lists “All,” replace the existing manual with the reissued manual. If the Revised Pages column lists individual entries (e.g., 25, 32), either update the existing manual with the Change Pages Document or print the entire new manual.

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| **Date** | **Revised Pages** | **Patch Number** | **Description** |
| 10/2009 | i-ii, 7, 9, 17 | PSB\*3\*47 | Added PSBPXFL and PSBPXLP to the list of installed routines. Add Immunizations Documentation by BCMA Nightly Task [PSB PX BCMA2PCE TASK] option to the *Manager* [PSB MGR] menu. Added Patient Care Encounter to the External Relationships section.  REDACTED |
| 01/2009 | i-ii, iv, 6-7,  13-14,  18-19, 21 | PSB\*3\*28 | * Update Table of Contents to include Remote Procedure Calls. (p. iv) * Increased the total for the BCMA V .3.0 routines to 85 and files to 6. (p.6-7) * Updated the files and “BCMA V.3.0 Routines Installed onto VistA Server” Example. (p.7) * Updated the Mail Group Types in BCMA V.3.0 to include scanning failures. (p. 13) * Updated Security Keys to include PSB UNABLE TO SCAN. (p. 14) * Added list of Remote Procedure Calls (RPCs). (p. 18)   -Added new Glossary entry for LIMITED ACCESS BCMA. (p. 19)   * Added new Glossary entry for PSB UNABLE TO SCAN. (p. 21) REDACTED |
| 03/2008 | 6-7, 9-10,  C-1, C-2,  C-4, C-5,  C-7, C-9 | PSB\*3\*2 | Description of [PSBO BZ] functionality added, code strings updated (p. C-1.)   * Updated Intermec Printer Team Type Codes Information, Intermec Barcode Label Field Position Map, Intermec printer Sample Terminal Type File code descriptions updated (pp. C-4, C-5, C-7.) * Barcode samples updated – references to “Dosage” changed to “Dose” and space between colon and dose measurement deleted (p. C-9.)   REDACTED |
| 09/2007 | 6-7 | PSB\*3\*32 | * Increased the total for the BCMA V. 3.0. routines to 68. (p.6) * Updated the “BCMA V. 3.0 Routines Installed onto VistA Server” example to include the following routine: PSBO XA. (p. 7)   REDACTED |
| 08/2006 | 6-7,  9, 13 | PSB\*3\*13 | * Increased the total for the BCMA V. 3.0. routines to 68. (p.6) * Updated the “BCMA V. 3.0 Routines Installed onto VistA Server” example to include the following routine: PSBO XA. (p. 7) * Updated Manager Menu [PSB MGR] options list to include Missing Dose Followup (correction) and Unknown Action Status Report (new with this patch). (p. 9) * Added description of the “Unknown Actions” mail group parameter. (p. 13)   REDACTED |

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| 08/2006 | iv,  6, C1-C10 | PSB\*3\*2 | **Note**: The functionality listed below will be activated with the release of PSB\*3\*2.   * Updated Table of Contents to include new Appendix C. (p. iv) * Added reference to new Unit Dose label printing functionality and Appendix C. (p. 6) * Added Appendix C: Interfacing with the Bar Code Label Printer. (p. C1-C10)   REDACTED |
| 12/2005 | 6-7 | PSB\*3\*16 | * Increased the total for the BCMA V. 3.0. routines to 67. (p.6) * Updated the “BCMA V. 3.0 Routines Installed onto VistA Server” example to include the following routines: PSBCSUTL, PSBCSUTX, PSBCSUTY. (p. 7)   REDACTED |
| 01/2005 | 6-7,  14,  20-21 | PSB\*3\*4 | * Increased the total for the BCMA V. 3.0. routines to 64. (p.6) * Updated the “BCMA V. 3.0 Routines Installed on to VistA Server” example to include the PSBOPF routine. (p. 7). * Added description for new PSB READ ONLY security key. (p.14) * Added new Glossary entries for PSB READ ONLY and Read-Only BCMA. (p. 20-21)   REDACTED |
| 10/2004 | 6-7 | PSB\*3\*3 | * Increased the total for the BCMA V. 3.0 routines to 63. (p. 6) * Updated the “BCMA V. 3.0 Routines Installed on to VistA Server” example to reflect the inclusion of routines PSBML2, PSBML3, and PSBMLLKU to the VistA Server. (p. 7)   REDACTED |
| 02/2004 |  |  | Original Released BCMA V. 3.0 Technical Manual/Security Guide  REDACTED |

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| **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 (53.77, BCMA Unable to Scan Log * ^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. |
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| **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 memory. |

## Example: BCMA V. 3.0 Routines Installed onto VistA Server

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PSBALL | PSBAPIPM | PSBCHIVH | PSBCHKIV | PSBCSUTL | PSBCSUTX | PSBCSUTY |
| PSBMD | PSBML | PSBML1 | PSBML2 | PSBML3 | PSBMLEN | PSBMLEN1 |
| PSBMLHS | PSBMLLKU | PSBMLTS | PSBMLU | PSBMLVAL | PSBO | PSBO1 |
| PSBOAL | PSBOBL | PSBOBLU | PSBOBZ | PSBOCE | PSBOCE1 | PSBOCI |
| PSBOCI1 | PSBOCM | PSBOCM1 | PSBOCP | PSBOCP1 | PSBODL | PSBODL1 |
| PSBODO | PSBOHDR | PSBOIV | PSBOIV1 | PSBOMD | PSBOMH | PSBOMH1 |
| PSBOMH2 | PSBOML | PSBOMM | PSBOMM2 | PSBOMSF | PSBOMT | PSBOMT1 |
| PSBOMV | PSBOPE | PSBOPF | PSBOPI | PSBOPM | PSBOSF | PSBOST |
| PSBOVT | PSBOWA | PSBOXA | PSBPAR | PSBPARIV | PSBPOIV | PSBPRN |
| PSBPXFL | PSBPXLP | PSBRPC | PSBRPC1 | PSBRPC2 | PSBRPC3 | PSBRPCMO |
| PSBRPCXM | PSBSAGG | PSBSVHL7 | PSBUTL | PSBVAR | PSBVDLIV | PSBVDLPA |
| PSBVDLPB | PSBVDLTB | PSBVDLU3 | PSBVDLVL | PSBVITFL | PSBVLDU1 | PSBVLDU2 |
| PSBVLDUD | PSBVT | PSBVT1 |  |  |  |  |
| 87 routines | |  |  |  |  |  |

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| **BCMA CHUI Menus** | BCMA V. 3.0 exports three main menus. They include those listed below, in the CHUI version of BCMA V. 3.0. The options for each menu are listed in this section.   * **Manager Menu:** [PSB MGR] is assigned to managers * **Pharmacist Menu:** [PSB PHARMACY] is assigned to all inpatient Pharmacists * **Nurse Menu:** [PSB NURSE] is assigned to all clinicians and other personnel who administer active medication orders   **Manager Menu [PSB MGR]**  This menu includes the following options:   * Drug File Inquiry * Immunizations Documentation by BCMA Nightly Task * Medication Administration Menu Nursing   + Medication Administration Log Report   + Missed Medications Report   + Ward Administration Times Report   + Due List Report   + PRN Effectiveness List Report   + Enter PRN Effectiveness   + Manual Medication Entry   + Medication Administration History (MAH) Report   + Missing Dose Request   + Medication Variance Log   + Drug File Inquiry * Medication Administration Menu Pharmacy   + Medication Administration Log Report   + Missed Medications Report   + Due List Report   + Medication Administration History (MAH) Report   + Missing Dose Request   + Missing Dose Followup   + Missing Dose Report   + Label Print   + Drug File Inquiry * Missing Dose Followup * Reset User Parameters * Trouble Shoot Med Log * Unknown Action Status Report |

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| **BCMA CHUI Menus (cont.)** | **Pharmacy Medication Administration Menu [PSB PHARMACY]**  This menu includes the following options:   * Medication Administration Log Report * Missed Medications Report * Due List Report * Medication Administration History (MAH) Report * Missing Dose Request * Missing Dose Followup * Missing Dose Report * Label Print * Drug File Inquiry   **Nursing Medication Administration Menu [PSB NURSE]**  This menu includes the following options:   * Medication Administration Log Report * Missed Medications Report * Ward Administration Times Report * Due List Report * PRN Effectiveness List Report * Enter PRN Effectiveness * Manual Medication Entry * Medication Administration History (MAH) Report * Missing Dose Request * Medication Variance Log * Drug File Inquiry |

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| **Internal Relations** | This section describes options, package-wide variables, and templates within BCMA V. 3.0.  **Options**  You can invoke ALL options in BCMA V. 3.0 independently.  **Package-Wide Variables**  BCMA V. 3.0 does *not* include package-wide variables.  **Templates**  BCMA V. 3.0 does *not* include any templates for Sort, Input, or Print. |
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| **External Relations** | BCMA V. 3.0 can only be run in an environment that already has several existing features, such as a standard MUMPS operating system. It also requires the following Department of Veterans Affairs (VA) software packages (versions listed or higher) — and all current patches. Otherwise, BCMA V. 3.0 will *not* be fully functional for your users.   * Inpatient Medications 5.0 * Kernel 8.0 * MailMan 8.0 * Nursing 4.0 * Order Entry/Results 3.0   Reporting   * Patient Care Encounter 1.0 * Pharmacy Data 1.0   Management   * RPC Broker (32-bit) 1.1 * Toolkit 7.3 * VA FileMan 22.0 * Vitals/Measurements 5.0 |

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**External Relations (cont.)**

## Callable Routines, Entry Points, and Variables

BCMA V. 3.0 includes two callable routines: PSBAPIPM and PSBMLHS. Each routine is described in this section, along with the entry points and variables information for each.

* **PSBAPIPM:** Provides information to Inpatient Medications

V. 5.0 for determining the start date for a renewed order.

* **PSBMLHS:** Provides other software packages with the ability to call the BCMA Medication History Report. The report lists medications, that a patient has received, by orderable item.

## Database Integration Agreements (DBIAs)

BCMA subscribes to Database Integration Agreements (DBIAs) with the Inpatient Medications, CPRS, Nursing, and Registration packages. BCMA V. 3.0 also offers DBIAs for other packages to subscribe to as well.

For detailed information about these DBIAs, log in to FORUM and select the *Integration Agreements Menu* [DBA IA ISC] option located under the *DBA* [DBA] option (Data Base Administrator). Once in the Integration Agreements Menu Option, select “Inquire” and type **BCMA** at the “Select INTEGRATION REFERENCES:” prompt.

## Remote Procedure Calls (RPCs)

Following is a list of Remote Procedure Calls associated with BCMA.

|  |  |
| --- | --- |
| 1 PSB ALLERGY | 2 PSB BAG DETAIL |
| 3 PSB CHECK IV | 4 PSB CHECK SERVER |
| 5 PSB COVERSHEET1 | 6 PSB CPRS ORDER |
| 7 PSB DEVICE | 8 PSB FMDATE |
| 9 PSB GETIVPAR | 10 PSB GETORDERTAB |
| 11 PSB GETPRNS | 12 PSB GETPROVIDER |
| 13 PSB INSTRUCTOR | 14 PSB IV ORDER HISTORY |
| 15 PSB LOCK | 16 PSB MAIL |
| 17 PSB MAN SCAN FAILURE | 18 PSB MAXDAYS |
| 19 PSB MED LOG LOOKUP | 20 PSB MEDICATION HISTORY |
| 21 PSB MOB DRUG LIST | 22 PSB NURS WARDLIST |
| 23 PSB PARAMETER | 24 PSB PUTIVPAR |
| 25 PSB REPORT | 26 PSB SCANMED |
| 27 PSB SCANPT | 28 PSB SERVER CLOCK VARIANCE |
| 29 PSB SUBMIT MISSING DOSE | 30 PSB TRANSACTION |
| 31 PSB USERLOAD | 32 PSB USERSAVE |
| 33 PSB UTL XSTATUS SRCH | 34 PSB VALIDATE ESIG |
| 35 PSB VALIDATE ORDER | 36 PSB VERSION CHECK |
| 37 PSB VITAL MEAS FILE | 38 PSB VITALS |
| 39 PSB WARDLIST |  |

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