BAR CODE MEDICATION ADMINISTRATION

BCMA Remote Configuration and Test

Announcement and Agenda

April 18-22

Crownpoint Health Care Facility
Crownpoint, New Mexico

Office of Information Technology
Division of Information Technology

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1.0 General Information

1.1 Background

Medication errors are common. The National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP) defines a medication error as "…any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication in in control of the healthcare professional, patient, or consumer" (2004). According to the 1999 Institute of Medicine's Report "To Err is Human", medication errors often have tragic consequences for patients, approximately 20% which are life-threatening. Medication errors also result in great financial costs such as malpractice premiums and losses in worker productivity and cause substantial extra work for hospitals.

Serious medications errors result in preventable adverse drug events (ADEs). It is estimated that errors from medication errors have led to 7000 deaths per year. (IOM, 1999). These errors usually result from poorly designed systems that do not prevent errors from occurring. Medication administration is an example of a multi-step system that because of its complexity can be a challenge to accomplish safety and without error. Errors resulting in preventable ADEs occur during the stages of (a) ordering, (b) transcription, (c) dispensing, (d) administration, and (e) documentation. Over 30% of these errors are committed at the point of administration (IOM, 1999).

Computer Provider Order Entry (CPOE) and Bar Code Medication Administration (BCMA) are Health Information Technologies that have demonstrated a substantial decrease in medication errors. BCMA technology verifies medications by incorporating bar-code verification technology within an electron medication administration record (eMAR) to prevent both administration and documentation errors. The eMAR helps reduce transcription errors by ensuring medications are tracked from the point of physician order, to the pharmacist, to the nurse administering the medication. .

Federal regulations and professional societies have publically recommended or endorsed the use of BCMA for the purpose of improving medication safety and reducing errors. Recommendations and standards direct basic safe practices for medication administration concerning (a) basic safe practices for medication administration, (b) timing of medication administration, (c) time critical medication, and (d) missed or late administration of medications.

1.2 American Society of Health System Pharmacists (ASHP)

The 2012 ASHP Hospital Survey (Pedersen et. al., 2013) found that there is widespread use of EHRs. CPOE, BCMA, and Automated Dispensing Cabinets (ADCs) More than two-thirds of hospitals were using BCMA in 2012. CMS states that 10% is the minimum threshold for medication orders to be tracked via BCMA and eMAR. However, many of these hospitals were already operating at 90% (Neuenschwander, 2010).

1.3 The Leapfrog Group

Leapfrog Group's 2015 Hospital Survey is being used for the process of establishing a national standard for BCMA implementation. This standard will reflect both the use of BCMA and ensuring that hospitals have taken steps to minimize workarounds of using BCMA systems correctly

1.4 Department of Veterans Affairs (VA)

The Department of Veterans Affairs (VA) required all 172 Veterans Health Administration Hospitals (VHA) to implement BCMA between 1998 and 2002, setting the National stage for BCMA patient safety. The Bar Code Resource Office (BCRO) supports the FDA's regulatory language for drug labeling and works with the National Center for Patient Safety to reduce and prevent medication errors.

1.5 Food and Drug Administration (FDA)

The Food and Drug Administration (FDA) enacted regulation in 2004 requiring all manufacturers to label medications with a bar code specifying the National Drug Code for use with BCMA systems and to reduce errors.

1.6 Institute of Safe Medical Practices (ISMP)

The Institute of Safe Medical Practices (ISMP) in partnership with the American Hospital Association and Health Research and Educational Trust has published its "Pathways for Medication Safety: Assessing Bedside Barcoding Readiness" Toolkit". This tool assists hospitals to better understand their readiness as well as what is required for implementing a bar-coded drug administration system.

1.7 The ASHP Foundation

The ASHP Research and Education Foundation established a Pharmacist's Toolkit for "Implementing a Bar code Medication Safety Program in 2004.

1.8 American Academy of Nursing (AAN)

The American Academy of Nursing, an independent affiliate of the American Nurses Association (ANA) has endorsed the use of BCMA in Hospitals.

1.9 The Agency for Healthcare Research and Quality (AHRQ)

The Agency for Healthcare Research and Quality (AHRQ) published its findings from the AHRQ Health IT Portfolio in 2008 "Using Barcode Medication Administration to Improve Quality and Safety". AHRQ funded a diverse set of health IT projects to examine how applications such as barcoding can improved the quality, safety, efficiency and effectiveness of health care.

1.10 The Joint Commission (TJC)

In 2004, A Joint Commission on Accreditation of Healthcare Organizations' advisory committee included in its proposed Nation Patient Safety Goals that hospitals develop a plan for implementing bar code medication administration systems.

1.11 Office of the National Coordinator (ONC) and Center for Medicare and Medicaid Services (CMS)

Both the Office of the National Coordinator (ONC) Health IT Certification Program and Center for Medicare and Medicaid Services (CMS) have proposed adoption of Electronic Medical Administration Record (eMAR) criterion for Stage 2 and Stage 3 Meaningful Use. Since 2012, barcoding has been required for hospitals under Stage 2 meaningful use core measures. The eMAR Measure is now "Topped Out" meaning that the measure performance is so high and unvarying that meaningful improvement in performance can no longer be made.

1.12 Meaningful Use Stage 2 Final Rule

The Centers for Medicare and Medicaid Services (CMS) published a final rule that specifies the Stage 2 criteria that eligible professionals (EP), eligible hospitals, and critical access hospitals (CAH) must meet in order to continue to participate in the Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs. Through the Stage 2 requirements of the Medicare and Medicaid EHR Incentive Programs, CMS seeks to expand the meaningful use of certified EHR technology. Certified EHR technology used in a meaningful way is one piece of a broader health information technology infrastructure needed to reform the health care system and improve health care quality, efficiency, and patient safety.

This final rule specified the Stage 2 criteria that EPs, eligible hospitals, and CAHs must meet in order to qualify for Medicare and/or Medicaid EHR incentive payments. In addition, it specifies payment adjustments under Medicare for covered professional services and hospital services provided by EPs, eligible hospitals, and CAHs failing to demonstrate meaningful use of certified EHR technology and other program participation requirements. This final rule revises certain Stage 1 criteria, as finalized in the July 28, 2010 final rule, as well as criteria that apply regardless of Stage.

New Core and Menu Set Objectives and Measures for Stage 2:

> **Automatically track medication orders using an electronic medication administration record (eMAR)**
>
> (16)(i) Objective. Automatically track medications from order to administration using assistive technologies in conjunction with an electronic medication administration record (eMAR).
>
> (ii) Measure. Subject to paragraph (c) of this section, more than 10 percent of medication orders created by authorized providers of the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period for which all doses are tracked using eMAR. (iii) Exclusion in accordance with paragraph (i)(2) of this section. Any eligible hospital or CAH with an average daily inpatient census of fewer than 10 patients.

1.13 Bar Code Medication Administration Assistive Technology

Bar Code Medication Administration (BCMA) assistive technology is a software application which is used by the Veterans Health Administration (VHA) facilities to document medication administration activities and reduce medication errors. Ensuring the software is usable is paramount to successful adoption by the end-users. The Bar Code Resource Office (BCRO), using a Cognitive Engineer/Human Factors expert, has developed a structured process for performing usability assessments of new features under development. The following information is provided as a guide to assist the BCMA Software Development team in applying a structured process to future usability assessments:

1.14 Certification and Standards

The following is the corresponding certification and standards criteria for electronic health record technology that supports achieving the meaningful use of this objective.

> § 170.314(16) Inpatient setting only – electronic medication administration record

(i) In combination with an assistive technology that provides automated information on the “rights” specified in paragraphs (a)(16)(i)(A) through (E) of this section, enable a user to electronically verify the following before administering medication(s):

(A) Right patient. The patient to whom the medication is to be administered matches the medication to be administered.

(B) Right medication. The medication to be administered matches the medication ordered for the patient.

(C) Right dose. The dose of the medication to be administered matches the dose of the medication ordered for the patient.

(D) Right route. The route of medication delivery matches the route specified in the medication order.

(E) Right time. The time that the medication was ordered to be administered compared to the current time.

(ii) Right documentation. Electronically record the time and date in accordance with the standard specified in § 170.210(g), and user identification when a medication is administered.

*Depending on the type of certification issued to the EHR technology, it will also have been certified to the certification criterion adopted at 45 CFR 170.314 (g)(1), (g)(2), or both, in order to assist in the calculation of this meaningful use measure.

§ 170.210(g) Synchronized clocks

The date and time recorded utilize a system clock that has been synchronized following (RFC 1305) Network Time Protocol, (incorporated by reference in § 170.299) or (RFC 5905) Network Time Protocol Version 4, (incorporated by reference in § 170.299)

2.0 Purpose of Configuration and Test

The primary purpose of this BCMA activity is to both configure and test (a) ADT Realignment to include Release Events, (b) Automated Dispensing Cabinets (ADS) and Profiling; (c) BCMA hardware to include printers, scanners, and labels; (d) BCMA Resource and Patient Management System (RPMS) software, and (e) BCMA client. Demo or Test patients with appropriate test orders will also be set up prior to testing. Testing should be isolated or assigned to a single ward to prevent non-testing users from inadvertently disturbing the patients reserved for testing.

3.0 VA-IHS BCMA Cross-Functional Team

3.1 Co-Chairs

Last Name	First Name	Title
Graves	Cathi	Senior Management Analyst, BCRO, Office of Informatics and Analytics (OIA), VHA
Taylor	David	BCMA Federal Lead, Office of Information Technology (OIT), Indian Health Service (IHS)

3.2 CFT Voting Members

Last Name	First Name	Title
Patillo	Jackie	Acting Executive Director for Field Operations, OIT, Department of Veterans Affairs (VA)
Moore	Lori	RPMS Investment Manager, OIT, IHS
Taylor	David	BCMA Federal Lead, OIT, IHS
Alcorn	Deborah	BCMA Co-Federal Lead, OIT, IHS

3.3 Cross Functional Team Standing Members

Last Name	First Name	Title
Alcorn	Deborah	BCMA Nurse Consultant, OIT, IHS
Allen	Mike	BCMA Pharmacy Consultant, OIT, IHS
Bagby	Jonathan	Nurse Consultant, BCRO, OIA, VHA
Baylis	Randall	Clinical 1 Support Team, OIT, VA
Bishop	Bradley	Pharmacy Consultant, OIT, IHS
Bloch	Jaci	Clinical 1 Support Team, OIT, VA
Carlson	Russ	Acting Director, BCRO, OIA, VHA
Connolly	Barbara	Clinical 1 Support Team, OIT, VA
Cook	Sean	Business Analyst, Data Networks Corporation (DNC) Contractor
Corma	Stephen	Pharmacist Consultant, BCRO, OIA, VHA
Cownie	Kevin	Clinical 3 Support Team, OIT, VA
Johnson	Katie	Chair, Pharmacy Professional Specialty Group, IHS

Last Name	First Name	Title
Devlin	Vitalia	Clinical Product Support Division Director, OI&T, VA
Lyttle	Kim	Clinical 1 Support Team, OIT, VA
Fox	Kirk	Clinical 1 Support Team, OIT,VA
Johnson	Dale	Clinical 2 Support Team, OIT, VA
Linville	Kathleen	Clinical Product Support, OI&T, VA
Kost	Vivian	BCMA Nurse Consultant, MSC Contractor, IHS
Mian	Naeem	Clinical 1 Support Team, OIT, VA
Nelson	Joe	VHA IHS Liaison and IT Informatics
Patten	Tracie	Acting Principal Pharmacy Consultant, IHS
Ray	Kathy	Clinicians' Information Management Technology Advisory Council (CIMTAC) Chair, Business Owner, IHS
Saddler	Chris	BCMA IT support, OIT, IHS
Scott	Hugh	VHA IHS Liaison and IT Informatics
Stearle	Carla	BCMA Pharmacy Consultant, OIT, IHS
Vinokur	Ella	Enterprise Systems Management, Health Provider Systems (Janet M. Reimer - Alternate)
Von Bibra	Linda	CIMTAC Representative, Business Owner, IHS

3.4 Subject Matter Experts: VA – BCMA

Last Name	First Name	Title
Shum	Daphen	Pharmacist, Perry Point VA Medical Center, Perry Point, MD
Strauss	Leanne	Nurse/BCMA Coordinator, VA New Jersey Healthcare System

3.5 Subject Matter Experts, Area and Site Teams: IHS

3.5.1 Albuquerque Area Office BCMA Team

Last Name	First Name	Title
Darwin	Wil	RPMS-EHR CAC/Pharmacy Consultant
Lucero	Joseph	Information Management Officer

Last Name	First Name	Title
Candelaria	Jacque	Meaningful Use Coordinator

3.5.2 Belcourt, ND

Last Name	First Name	Title
Indvik	Kathy	BCMA Lead, CAC
Knutson	Ken	Informatics Pharmacist
Lenoir	Nichole	Nurse Supervisor
Wilkie	Chance	Site Manager

3.5.3 Blackfeet Community Hospital, Browning, MT

Last Name	First Name	Title
Kennedy	Jamie	Inpatient Pharmacy CAC & BCMA Lead
Farr	James	Night Nursing Supervisor BCMA Coordinator
Ramirez	Charlene	Day Nursing Supervisor BCMA Coordinator
St. Goddard	Shirley	IT Specialist, RPMS
Brandvold	Purnee	Clinical Applications Coordinator
Chosa	Erik	Area Pharmacy & CAC
Kuka	Verna	Area IT/RPMS Specialist
Thomas	Stacey	Pharmacy Supervisor
Sabo	Jody	Surgery Supervisor

3.5.4 Cherokee Indian Hospital Authority (CIHA)

Last Name	First Name	Title
Elkins	Kathryn	BCMA Team Lead
Eller	Jim	Information Technology Specialist
Lambert	Wanda	BCMA Coordinator
Helm	Elizabeth	Director of Pharmacy
White	Abigail	Clinical Applications Coordinator

3.5.5 Cherokee Nation of Oklahoma-WW Hastings Hospital

Last Name	First Name	Title
Potts	Toni	Clinical Applications Coordinator Supervisor
Lyon	Lisa	Nurse Clinical Informaticist
Tapp	Jamie	Facility Lead/Pharmacy Informaticist
McCandless	Julie	Clinical Applications Coordinator
Thornton	Stacey	Chief Pharmacist

3.5.6 Cheyenne River Service Unit – SD

Last Name	First Name	Title
Lee	Joy	BCMA Co-Project Lead
Liu	Roger	BCMA Co-Project Lead
Watt	Johnna	Director of Nursing
Hollow Horn	Eunice	Nursing BCMA Coordinator
Yu	Rebecca	Pharmacy Informatics
Ducheneaux	Guthrie	Clinical Applications Coordinator

3.5.7 Chickasaw Nation, OK

Last Name	First Name	Title
Freeze	Travis	BCMA Coordinator
Kennedy	Melissa	BCMA Coordinator
Anderson	Jesse	IT
Simpson	Patrick	IT

3.5.8 Chinle Comprehensive Health Care Facility, AZ

Last Name	First Name	Title
Bird	Nick	CAC/BCMA Lead
Fields	Jeanetta	BCMA Coordinator
Chase	Renee	BCMA Coordinator
Gentles	Andrew	Inpatient Pharmacy Supervisor
Cooper	Valerie	Informatics Pharmacist

3.5.9 Choctaw Health Center, MS

Last Name	First Name	Title
Willis	Leslie	CAC/BCMA Project Lead
McKee	Nick	Pharmacy Informaticist
Willis	Raymond	Information Technology
Blair	Kristen	Nurse BCMA Coordinator/Inpatient Nurse Manager

3.5.10 Choctaw Nation, OK

Last Name	First Name	Title
Steers	Randy	Director of Inpatient Pharmacy Services
Olson	Matt	Pharmacy Administrative Data Processing Applications Coordinator
Green	Ross	Project Lead/CAC
Randolph	Audrine	IT

3.5.11 Claremore Indian Hospital, OK

Last Name	First Name	Title
Wampler	Tamara	RN Nurse Manager ICU/Medical Clinic, BCMA Project Lead
Smith	Marty	CAC
Tricinella	Jodi	BCMA Coordinator/ Pharmacist
Battese	Kelly	Facility Leader
Murphy	Billy	Biomedical Engineer
Rhodes	Jamie	Facility Leader
Ponder	David	IT Support
Welch	Nancy	Respiratory Therapist
Sanders	Dr.	(Acting) Medical Director
O'Mary	Cindy	BCMA Coordinator
Lee	Mike	Chief Pharmacist
Wilton	Cory	Clinical Application Coordinator

3.5.12 Crownpoint Health Care Facility, NM

Last Name	First Name	Title
Alvarez	Lydia	BCMA Project Lead – Clinical Application Coordinator
Kalathil	Abraham	Pharmacy Management and Informaticist
Schneider	Cody	Nurse Management – BCMA Coordinator
Burbank	Jimmy	Information Technology Specialist
Becenti	Carlos	Information Technology Specialist
LaChappelle	Cameron	Pharmacy Resident
Francisco	Dorothina	Lead Clinical Nurse

3.5.13 Fort Defiance Indian Hospital, AZ

Last Name	First Name	Title
Benally	Brenda	BCMA Coordinator
Lui	Crystal	BCMA Coordinator
Boress	Jonathan	BCMA Coordinator
Beasley	Michelle	BCMA Coordinator
Nez	Melinda	BCMA Coordinator

3.5.14 Gallup Indian Medical Center, NM

Last Name	First Name	Title
Platero	Marci	Clinical Applications Coordinator
Ruddle	Andy	BCMA Nursing Coordinator
Culligan	Kerri	BCMA Coordinator
Garcia	Anna	BCMA Nurse Manager
Dineyazhe	Dawn	Clinical Applications Coordinator
Cope	Ray	PharmD Inpatient Pharmacy Supervisor

3.5.15 Great Plains Area Office BCMA Team

Last Name	First Name	Title
Rauth	Leslye	Area Clinical Applications Coordinator, Great Plains Area

Last Name	First Name	Title
Hall	Martin	Information Technology Specialist, Great Plains Area Office
Odens	Deb	Area Clinical Applications Coordinator, Great Plains Area

3.5.16 Lawton Indian Hospital, OK

Last Name	First Name	Title
Littledeer	Lenora	Director of Nursing
Battiest	Raelyn	Nursing Manager
Villines	Sheila	Nurse Informaticist/BCMA Coordinator
Riordan	Thomas	Inpatient Pharmacist
Miller	Matthew	Pharmacy Informaticist
Robertson	Natalie	Director of Pharmacy
Harris	Bill	Information Technology Specialist
Dunn	Teresa	Clinical Application Coordinator
Holmes	Michael	Quality/Risk Manager
Derrico	Barbara	Nurse Supervisor – Day Surgery

3.5.17 Mescalero Service Unit, NM

Last Name	First Name	Title
Simmons	Dorlynn	Health Administrator
Murphy	Kathy	IMS Site Manager
Yolanda	Adams	Director of Nursing
Marina	Mendez	Clinical Application Coordinator
Jean	Dutra	Pharmacist Informaticist

3.5.18 Mt. Edgecumbe Hospital - Sitka AK

Part of SEARHC (Southeast Alaska Regional Health Consortium)

Last Name	First Name	Title
Apathy	Peter	Systems Transformation Project Manager

Last Name	First Name	Title
Skan	Eric	Clinical Informaticist for Pharmacy
Langdorf	Brad	Chief Nursing Officer
Heston	Teresa	Information Technology Staff
Anderson	Bill	Information Technology Staff
Parrish	Wade	Information Technology Staff
Merculief Barker	Jay	Information Technology Staff
Stiles	Rhonda	Information Technology Staff
Chambers	Maya	Information Technology Staff
Gosney	Kimiko	Area CAC, Alaska Native Tribal Health Consortium (Anchorage)
McIntyre	Carlene	PharmD, Area Pharmacy Consultant, Alaska Native Tribal Health Consortium (Florida)
Gale	Traci	Director of Pharmacy

3.5.19 Nashville Area Office BCMA Team

Last Name	First Name	Title
Bartlett	Robin	CAC, Pharmacy Consultant
Boykin	Max	Nurse Consultant
Wright	Mitch	Division of information Resources Management Director

3.5.20 Navajo Area Office BCMA Team

Last Name	First Name	Title
Ray	Kathy	CAC, Navajo Area Office
Yazzie	Jeannette	Nurse Consultant, Navajo Area Office
Kopenhaffer	Thad	Pharmacy Consultant (A), Navajo Area Office
Cody	Keri	Information Technology Specialist, Navajo Area Office

3.5.21 Northern Navajo Medical Center (NNMC-Shiprock, NM)

Last Name	First Name	Title
McAtasney	Grace	Clinical ICU Coach
Smiley	Farrah	BCMA Coordinator
Krestel	Clint	BCMA Coordinator
Van Tyle	Kendall	BCMA Coordinator
Fischer	Neil	Clinical Applications Coordinator
Thompson	Regina	(ICU Manager), Implementation Lead

3.5.22 Oklahoma City Area Office BCMA Team

Last Name	First Name	Title
Cross	Charles	Information Technology Specialist
Burchett	Max	Pharmacy Informaticist
Lambeth	Jonathan	Information Technology Specialist
Loving	Becky	Nurse Consultant
Patten	Tracie	Pharmacy Consultant
Rubin	Amy	Clinical Applications Coordinator
Thompson	Robin	Assistant Clinical Applications Coordinator

3.5.23 Phoenix Area Office BCMA Team

Last Name	First Name	Title
Ahasteen	Ann	IT Specialist
Campbell	Brian	Acting Pharmacy Consultant
Cody	Keri	BCMA Coordinator
John	Karen	Director of Clinical Informatics (Acting) Lead EHR Clinical Application Coordinator
Mosely	Elvira	Clinical Application Coordinator
Tennyson	Shawn	IT Specialist

3.5.24 Phoenix Indian Medical Center BCMA Team

Last Name	First Name	Title
Diggins	Daniel	Inpatient Pharmacist
Myers	Shannon	Acting BCMA Coordinator
Von Bibra	Lynda	Clinical Application Coordinator
Walling	Jeff	Informatics Pharmacist

3.5.25 Pine Ridge IHS Hospital/Great Plains Area, South Dakota

Last Name	First Name	Title
Austin	Latona	BCMA Pharmacy Coordinator/ BCMA Lead
Nelson	Angela	Inpatient Pharmacy Supervisor
Sahr	Rodney	Clinical Applications Coordinator
Hall	Martin	Great Plains Area IT Specialist, Sioux Falls
Jacobs	Tom	BCMA IT Specialist
Rauth	Leslye	Area Clinical Applications Coordinator, Sioux Falls
American Horse	Maxine	Inpatient Nursing Supervisor
Dixon	Linda	BCMA Nursing Coordinator
Schreiner	Tasheena	BCMA Nursing Coordinator
Stover	Ed	IT Specialist
Teresa	Blacksmith	OB Nursing Supervisor

3.5.26 Rosebud Comprehensive Health Care Facility, SD

Last Name	First Name	Title
Greenhagin	Carin	RN, Lead Nurse Informatics/ Acting Inpatient Supervisor
Frye	Matthew	Chief Pharmacy
Labelle	Jeanette	IT Supervisor
Ecoffey	Tammy	Clinical Applications Coordinator

3.5.27 San Fidel ACL Service Unit, NM

Last Name	First Name	Title
Detsoi	Fern	Health Administrator
Lucero	Merlin	IMS Site Manager
Pollock	Beatrice	Acting Director of Nursing/CAC
Palanki	Suryam	Pharmacist Informaticist

3.5.28 Santa Fe Indian Hospital, NM

Last Name	First Name	Title
Dye	Leslie	Health Administrator
Tenorio	Luke	IMS Site Manager
Bitsoie	Gary	Asst. IMS Site Manager
Palucci	Lisa	Director of Nursing
Kyle	Sheffer	Pharmacist Informaticist/CAC

3.5.29 Sells Service Unit, AZ

Last Name	First Name	Title
Lester	John	Clinical Applications Coordinator
Contos	Michael	Chief Pharmacist
Begay	Marjorie	HIMS Supervisor
Whitman	Yolanda	Coding Supervisor
Feldman	Lou	Pharmacy Informatics
Ignacio	Jolene	ER Nursing Supervisor
Carlyle	Doriann	Inpatient Nursing Supervisor
Deleon	Diana	Quality/Risk Manager
Nunez	Vanessa	Primary BCMA Coordinator
Tso	Kathy	Site Manager
Smith	Jennifer	Clinical Champion

3.5.30 Tucson Area Office

Last Name	First Name	Title
Wade	Karen	Division of Information Systems and Technology

3.5.31 Whiteriver Service Unit Indian Health Service (Phoenix Area)

Last Name	First Name	Title
Haigh	Randy	Clinical Applications Coordinator
Campbell	Brian	BCMA Project Lead
Berrett	Ben	Pharmacy and BCMA Coordinator
Vangie	Pablo	Nursing BCMA Coordinator, Nursing Supervisor
Clonts	Dan	Nursing BCMA Coordinator, Assistant Nurse Supervisor
Orzel	Paula	Nursing BCMA Coordinator, Assistant Nurse Supervisor
Morris	Janna	Clinical Application Coordinator
Cloud	Beverly	Nurse, Whiteriver Phoenix Area

3.5.32 Window Rock, AZ

Last Name	First Name	Title
Yazzie	Jeannette	BCMA Coordinator
Koppenaffer	Thad	BCMA Coordinator

3.5.33 Zuni Service Unit, NM

Last Name	First Name	Title
Grizzle	Rebecca	IMS Site Manager
Salvador	Roxanne	Asst. IMS Site Manager
Kanesta-Brislin	Terry	Director of Nursing
Romancito	Melanie	Clinical Application Coordinator
Le	Benjamin	Pharmacist Informaticist

4.0 Historical Cross-Reference

4.1 Background

This agenda has been developed over a period of time, during which a number of documents were developed to assist in the process of BCMA configuration. These documents were previously included as appendices to the Agendas for Configuration and Test.

These documents have been sufficiently developed that they have been split off from the agenda and are stand-alone files. These files are available from the IHS BCMA website at http://www.ihs.gov/bcma/resources/. They are now referenced in this agenda by their current names.

4.2 Historical Cross-Reference

Table 4-1 serves as a cross-reference between the previous and current names for the referenced documents.

Table 4-1: Historical Cross-reference

Former Appendix Name	Current Document Name
Appendix A: RPMS Omnicell & Pyxis Configuration	RPMS Omnicell Pyxis Configuration RPMS_OmnicellPyxisConfiguration.pdf
Appendix B: BCMA GUI GUIDE	GUI Guide BCMA_GUI_Guide.pdf
Appendix C: BCMA PSB3*42 RPMS and EHR Configuration Notes	Bar Code Medication Administration GUI (BCMA) Installation Guide and Release Notes bcma0300.42i.pdf
Appendix D: BCMA Site Parameter GUI Configuration	Site Parameter GUI Configuration BCMA_SiteParameterGUIConfiguration.pdf
Appendix E: BCMA Inpatient Medications Menus	Inpatient Medications Menus BCMA_InpatientMedicationsMenus.pdf
Appendix F: RPMS Provider Setup for BCMA	RPMS Provider Setup BCMA_RPMS_ProviderSetup.pdf
Appendix G: Scanable Canned BCMA Comments	Special Barcodes BCMA_SpecialBarcodes.pdf
Appendix H: ADT Configuration for Day Surgery	ADT Day Surgery Configuration BCMA_ADT_DaySurgeryConfiguration.pdf

5.0 Detailed Agenda

Note: Agenda is flexible and only intended to be a guide for BCMA Configuration & Test Activities. Activities are subject to change based upon unforeseen circumstances, availability of Subject Matter Experts & Professionals, technological challenges & barriers; and whatever else may arise.

All times are Central Time
Monday

Start	Topic
8:30 AM	At the end of this session participants should be able to: • Conduct a Virtual Emergency Room, Day Surgery, Inpatient Surgical Suite, Labor & Delivery, Obstetrics Post-Partum, and Inpatient Wards Admission and Medication Administration Assessment. • Examine the Admission, Discharge, and Transfer process • Examine Observation Beds utilization • Admission, Discharge, and Transfer (ADT) Patient Status Changes [PDF - 19 KB] http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/re sources/ADT_PatientStatusChanges.pdf • Examine ADT Inpatient Ward and Assignment of Beds Configuration to include • Obstetrics, Newborns, and Day Surgery • Reconfigure Delayed Orders and Auto Discontinuation or Orders to align with Emergency Department, Ambulatory Clinic, Observation Bed Utilization, and CMS 2- Midnight Rule • Examine the BCMA Performance Improvement Checklist and apply to the BCMA Configuration and Test Process http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/re sources/BCMAPracticeImprovementAssessment.pdf • Examine the ThinkTank® entries and apply to the BCMA Configuration and Test • Process • Survey Performance Improvement data as it applies to the Medication Administration • Process • Delineate the Medication Administration Process as it applies to BCMA and eMAR • Test the Converted IV Continuous and IV Intermittent as delineated in the EHR Version 1.1 Patch Note • Review Configuration of IV Continuous and IV Piggyback Medications • Configure Omnicell/Pyxis User Option http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/re sources/RPMS_OmnicellPyxisConfiguration.pdf
5:00 PM	Adjourn

Tuesday

Start	Topic
8:30 AM	**BCMA Hardware and Installation**: • Install, configure, and test BCMA printers/scanners – (if possible will attempt remote configuration with each site prior to onsite configuration): - Plug in scanner and scan setup card (each scanner has its own card). **Note**: Cards need to be retained in order to obtain warranty service and to reconfigure scanners as needed. - Install BCMA barcode wristband printer.[ZEBRA2824] - Test Using PRINT PATIENT WRISTBAND [DGPW PATIENT WRISTBAND PRINT]. - Install, configure, and test BCMA IV Label Printer [ZEB_IV_BCMA]. • Test using INDIVIDUAL LABELS (IV) [PSJI LBLI]. • Install, configure and test BCMA UD Label Printer [ZEB_UD_BCMA] • Test using Barcode Label Print [PSBO BZ] • Finalize printer setup including print head adjustment and move to Intended Locations • Contact BCMA Wristband, IV Label, and "BCMA Option 10" End-to-End Testing • Evaluate BCRO Bar Code Verification for all BCMA Printers as well as Unit Dose Packaging System and IV Labels.
11:30 AM	Lunch
1:00 PM	**BCMA GUI Software Installation**: http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/bcma0300.42i.pdf • Install BCMA GUI on all workstations. (Requires Administrator Privileges): - BCMA Software and Documentation are provided by SQA as a controlled release. - BCMA Client Install: • Unzip Broker_BCMA_42.zip • Follow the instructions found in the Bar Code Medication Administration GUI Guide to install and configure the BCMA Client and BCMA Parameter icons (bcma0300.42o.pdf). - Test BCMA Client and BCMA Parameters Applications. • Conduct BCMA GUI Testing on All Identified Workstations: **Note**: When directed BCMA is activated by checking PSB Online (or set parameter PSB Online to "Yes").
5:00 PM	Adjourn

Wednesday

Start	Topic
8:30 AM	**BCMA PSB3*42 RPMS and EHR Configuration** • Associate Nursing Units with MAS Wards (ADT): - Using Enter/Edit of FileMan NURS LOCATION file #211.4 (Create nursing unit names) and Match with the WARD LOCATION file #42. **Note**: Assess the Staffing, Geography, and Location of the Nursing Units to be able to combine reports. Note: Refer to the VA Nursing Package Documentation pages 17-23 regarding Nurse Location set-up and Ward Activation: http://www.va.gov/vdl/documents/Clinical/Nursing/nurs4_um.pdf • Create a Mock Medication Entry for a demo patient in the BCMA Medication Log: - Using Enter/Edit of FileMan, in file #53.79 BCMA MEDICATION LOG. - Select a demo patient and enter a simple medication (e.g., Acetaminophen). This mock entry in the BCMA Medication Log is necessary to prevent a null subscript error that will occur if the file is empty. • Create RPMS MailMan group and members “BCMA Issues” for: - BCMA order problems. - BCMA missing doses. - Make the Mailman group type: Public. - Consider including one or more printers as part of the group. • Configure the EHR Parameter ORWRP REPORT LIST to Include BCMA Reports: - ORRP BCMA MAH. - ORRP BCMA MED LOG. • Using Enter/Edit of FileMan in file #101.24 OE/RR REPORT configure Field Max Days Back for ORRP BCMA MAH and ORRP BCMA MED LOG Max Days Back to 30. • Confirm that TaskMan is running. • Listener XWBTCP on PORT for Broker Access must be running: - Menu [XWB MENU]. - Confer with RPMS site manager to identify the port number. • Ensure proper configuration with matching Station Number/Facility Number in: - INSTITUTION file #4 - MEDICAL CENTER DIVISION file #40.8 - STATION NUMBER (TIME SENSITIVE) file #389.9 • Ensure that each Ward Location has both Institution and Medical Center Division assigned. • Ensure proper configuration of MEDICATION ROUTES FILE to “Prompt for Injection Site in BCMA” and “Display in IV IVPB Tab in BCMA” using Medication Route File Enter/Edit menu in PDM. - Prompt for Injection Site in BCMA//Yes (IVPB, IV Push, IM, SQ, SC) - Display in IV IVPB Tab in BCMA//Yes (IVPB, IV Push) - Review Flag and Package for IVPB, IV Push, IM, SQ, and SC.
12:30 PM	Lunch

Start	Topic

1:30 PM	**BCMA Site Parameter GUI Configuration**
	http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/reso urces/BCMA_SiteParameterGUIConfiguration.pdf
	http://www.va.gov/vdl/application.asp?appid=84
	Configure BCMA GUI Parameter Tabs for:
	• Facility Tab: Check the BCMA On-Line box.
	• Parameters Tab:
	- Output Devices: The print out can be defined at the division level only using the GUI
	Note: PSB PRINTER MISSING DOSE may be set for the following:
	`1 Location LOC [choose from HOSPITAL LOCATION]`
	`2 Division DIV [choose from INSTITUTION]`
	`Enter selection: 1 Location HOSPITAL LOCATION`
	`Select HOSPITAL LOCATION NAME: 9A-MED---------- Setting PSB PRINTER MISSING DOSE for Location: 9A-MED - ----------MISSING DOSE PRINTER: [Define your Printer of Choice]`
	- Mail Groups
	- Reports
	- Bar Code Options
	- 5 Rights Override
	- Administration: require e-Sig to administer? (Suggest “No”)
	- Allowable time limit (in minutes):
	• Scheduled admin time before (suggest 60 min)
	• Scheduled admin time after (suggest 60 min)
	• PRN effectiveness entry within (suggest 240 min)
	- Virtual due list default times: (suggest 1 hour before and 1 hour after)
	- Include Schedule Types
	- Miscellaneous options:
	• Allowable server-client clock variance
	• BCMA time out (suggest 15 minutes)
	• Default Answer Lists tab:
	- Injection sites
	- Reasons given PRN
	- Reasons held
	- Reasons refused.
	Note: Refer to the BCMA Manager Manual for default answer list suggestions:
	http://www.va.gov/VDL/documents/Clinical/Pharm-Bar_Code_Med_Admin_(BCMA)/psb_3_man_um_r0912.pdf
	• IV Parameters:
	- Location, IV Type, Prompts

5:00 PM	Adjourn

Thursday

Start	Topic
8:30 AM	**Drug File, Medication Quick Orders, and Medication Quick Order Menus** http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/reso urces/BCMA_InpatientMedicationsMenus.pdf http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/BCMA_Inpatient_OB-GYN_Menu.pdf At the end of this session participants should be able to: • Complete drug file clean up as needed for training scenarios and create BCMA Medication Quick Orders and Menus **Note**: See Appendix A: - Create Medication Menu Headers. - Create Medication Quick Orders. - Hang the Medication Quick Orders to the Medication Menus. • Create 10-12 Demo,Patient BCMA patients for testing and training: - Demo, Patient BCMA Trial (to be used for all testing during configuration, test, training, and go-live). **Note**: "Test" will no longer work with EHR Patch 12. - Demo, Patient BCMA Alpha - Demo, Patient BCMA Bravo - Demo, Patient BCMA Charlie - Demo, Patient BCMA Delta - Demo, Patient BCMA Echo - Demo, Patient BCMA Fox - Demo, Patient BCMA Golf - Demo, Patient BCMA Hotel - Demo, Patient BCMA Instructor (to be used by BCMA Instructor during configuration, test, training, and go-live) - Demo, Patient BCMA Juliet - Demo, Patient BCMA Kilo - Demo, Patient BCMA Lima - Demo, Patient BCMA Mike - Demo, Patient BCMA November - Demo Patient BCMA Oscar - Demo Patient BCMA Papa - Admit demo patients BCMA to inpatient unit. • Enter and finish medication orders as needed for testing and training scenarios. • Validate system setup is adequate for BCMA testing and training.
12:30 PM	Lunch

Start	Topic
1:00 PM	**BCMA Clinical User Accounts** http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/BCMA_RPMS_ProviderSetup.pdf At the end of this session participants should be able to: • Assign BCMA Secondary Menus: - OR BCMA ORDER COM (Med Order Button) - PSB NURSE (Medication Administration Menu Nursing) - PSB PHARMACY (Medication Administration Menu Pharmacy) - PSB MGR (Bar Code Medication Coordinator/Administration Manager) - PSB GUI CONTEXT to each BCMA User • Allocate BCMA Keys: - PSB CPRS MED BUTTON for each User - PSB MANAGER to BCMA Coordinator and Nurse Managers • Load PIMS patch 1018 which includes: - The PIMS routine DGPWBD that contains the printer directions for printing the Wrist Band Bar Code. - IHS PIMS routines that support Day Surgery statistics. - BCMA routines that support the seven BCMA options written by the VA for IHS. - Three Terminal Type and Device file entries for the IV, UD and Wrist Band Printers. - The routines and file for BCMA BACKUP DATA. Specific details may be found in Appendix A: . • Routine APCDMSR1 has been distributed in BJPC patch 10. • Routine BEHOENPC has been distributed in EHR patch 12. • Modify routine %ZISTCP. This will later be distributed in a Kernel patch. • Additional Keys for Pharmacists, Students, and Instructors will be assessed on a Site-by-Site Basis.
Whenever	Adjourn – Whenever All Preparation Tasks Are Completed

Friday and Saturday

Start	Topic
8:30 AM	**BCMA Configuration, Test, and Super End User & Coordinator Training Final Preparation** At the end of this session participants should be able to: • Admit BCMA Demo Patients • Order Unit Dose, IV Infusion, IV Piggyback, IVP, Transdermal, Topical, and Special Medications off the BCMA Medication Training Menu • Pharmacy Verify and Complete Medication Orders • Generate Wrist Band and Medication Bar Code Labels • Create Mock Medication Drawers with Labels for each Patient • Set Up Computer Work Stations with Bar Code Scanner for each patient • Conduct “End-to-End” testing for both Wrist Band and Medication Bar Codes • Prepare to configure each student for “Demo Mode Only” prior to each Super End User Class • Complete all identified and unfinished tasks
Whenever	Adjourn – Whenever All Preparation Tasks Are Completed

6.0 Biographical Sketches

CAPT Deborah Alcorn, MSN, RN, CPC
BCMA Deployment Specialist
IHS OIT

Deborah has been a Registered Nurse for 32 years. During this time her nursing practice led her to work in a variety of private sector hospitals, clinics, tribal facilities, and for the last 20 years in IHS. Captain Alcorn is a citizen of the Cherokee Nation of Oklahoma. She received her commission in the U.S. Public Health Service (USPHS) in 1988 and works from the Nashville Area Office, IHS where she had served Tribes and IHS facilities in the role of Area Managed Care Consultant. Currently she is assigned to support the implementation of the IHS EHR by assisting the IHS OIT as one of the EHR Implementation Team Consultants.

Deborah Alcorn is also a Certified Professional Coder and has worked diligently with the Nashville Area Tribes to train and certify coding professionals at the Service Unit, Tribal, and Urban levels. Health Care Compliance is another field of particular interest and work for Captain Alcorn. Deborah's knowledge and expertise in nursing has enabled her to provide assistance to IHS, Tribal, and Urban facilities from both clinical and business perspectives with a focus on quality health care service delivery.

CAPT Michael Allen, MIS, RPh
EHR Pharmacy Consultant
IHS, OIT

Captain Allen is a commissioned Officer in the USPHS. He came from a family of pharmacists and holds a BS degree from Idaho State University. He has a Master of Information Systems degree from University of Phoenix. He started with USPHS after working in retail pharmacy for a few years. During his years in IHS he has served in Portland Area, Phoenix Area, and currently is in Tucson Area. His duties have included, besides being a pharmacist: Site Manager, Assistant Site Manager, CAC, Pharmacy Package Administrator, and POS specialist. He serves on the Pharmacy PSG and was recently appointed to the POS Technical Advisory Group. His children are out of the house and he has one granddaughter he misses greatly. He lives in Tucson with his wife and cat.

Jonathon Bagby, MSN, MBA, RN-BC
Nurse Consultant
VHA, OIA, BCRO
VA

Jonathan Bagby, MSN, MBA, RN-BC is a board-certified informatics nurse with over 10 years' experience with the VA, spending much of that time representing the interest of field nurses as a subject matter expert in developing the electronic medical record. Jonathan is a Nurse Consultant for the VA BCRO providing nursing informatics support and education to staff at the national level supporting over 150

VA medical centers. Prior to joining the BCRO, Jonathan worked for five years as the Nursing Informatics and BCMA Coordinator at McGuire VA Medical Center in Richmond, Virginia and led the nursing side of numerous projects (including revising the electronic medical record orientation program for new nurses, developing an electronic report for patient handoff, developing an electronic staff scheduling assistance program, and the implementation of automated medication distribution cabinets).

Jonathan has presented topics at several national informatics conferences including Health Information Management Systems Society, VeHU, and the unSUMMIT and is a published author of several peer reviewed articles. Jonathan has an Associate of Science degree from Richard Bland College of the College of William and Mary, a Bachelor of Science in Nursing from Virginia Commonwealth University, and a Master of Science in Nursing and Business Administration in Health Care Management from the University of Phoenix. He holds a Master's Certificate in Project Management from the George Washington University School of Business and is board-certified in Informatics through ANCC. His clinical background is in medical, surgical, and orthopedic nursing and has worked as a staff nurse, nurse manager, nursing informatics/BCMA coordinator, and nurse consultant.

CDR Bradley Bishop, PharmD, MPH
Pharmacy Consultant
IHS OIT

Commander Bradley Bishop is a Commissioned Officer in the USPHS and has been with IHS since 2001. Commander Bishop received his Doctor of Pharmacy from the University of Tennessee College of Pharmacy and Master of Public Health from the University of Massachusetts- Amherst. He has been assigned to Sells, AZ; Tahlequah, OK; Tucson Area Office; and IHS Headquarters as a pharmacist, chief pharmacist, clinical applications coordinator, and pharmacy consultant.

Jaculyn Bloch
Information Technology Specialist
Clinical 1 Support Team/Clinical Product Support
Product Development, VA

Jaci is currently working as an Information Technology Support Specialist with the VA. She started her career in 1984 as a Licensed Practical Nurse at the St. Cloud VA Health Care System working on the Nursing Home Care Unit. Jaci transferred to pharmacy, where she worked for 15 years as a registered pharmacy technician in all areas of the pharmacy including inpatient, outpatient, controlled substance management, inventory management, and procurement. She has worked as Vista Applications Coordinator (Automated Data Processing Application Coordinator - ADPAC) in the Pharmacy and Business Office service line acting as the liaison between the service and Information Resource Management (IRM).

In 2008, she joined the VISN 23 IT Department as a Vista Applications Support Specialist for the Vista pharmacy packages providing Vista and COTS pharmacy support for all sites in VISN 23. Since 2011, Jaci has been working as an Information Technology Specialist for the Clin 1 Support Team, CPS, PD, Department of VA. Jaci' s duties include reviewing and releasing software and supporting the Vista pharmacy packages including Inpatient, Outpatient, Controlled Substances, Drug Accountability, BCMA and Consolidated Mail Outpatient Pharmacy (CMOP). Jaci is currently working on several projects and workgroups including Electronic Prescribing of Controlled Substances, IMR V, IMR VI and BCMA for IHS.

Barbara Connolly
Information Technology Specialist
Clinical 1 Support Team/Clinical Product Support
Product Development, VA

Barbara Connolly has been a member of the Clinical 1 Product Support team since

1998. In this capacity she has supported BCMA, Inpatient Medications and Outpatient Pharmacy and CMOP. She has been actively supporting BCMA since its inception in 1999. Prior to her position with Product Support she was the Data Manager for Primary care at the Albany VAMC. She was responsible for the management of the Primary Care teams and provided upper management with a variety of reports centered around provider work load. She mentored graduate school interns who were earning a degree in Public Health. Barbara also worked for 10 years as an IT Specialist for the Albany VAMC supporting a large variety of applications and developing local software.

Sean Cook (Contractor) Applications Systems Analyst
DNC

Sean Cook is an Applications Systems Analyst with DNC and has worked on contract with the IHS since 2010. His professional experience in Pharmacy spans more than a decade and includes in-depth experience in interoperability, automation, and team leadership. Sean spent several years with, Omnicare, the largest long-term care pharmacy in Northern Illinois and a year with Provident Hospital of Cook County, Chicago. Prior to coming to Albuquerque, he provided systems and programming support for six pharmacies at Columbia St. Mary's in Milwaukee.

Stephen Corma, BS Pharm, RPh
Pharmacist Consultant
VHA, OIA, BCRO, VA

Stephen Corma is a registered Pharmacist serving as the Pharmacy Consultant for the VA BCRO. He joined the VA in 1990 after spending 7 years as a staff pharmacist in various private sector hospitals. He began his VA career at the Wilkes-Barre VA Medical Center in Wilkes-Barre, PA and has performed in a variety of roles which included staff Pharmacist (both inpatient and outpatient), Inpatient Pharmacy Supervisor, Assistant Chief of Pharmacy, Acting Chief of Pharmacy, and ADPAC.

Stephen became interested in informatics with the initial roll out of BCMA and worked closely with the BCMA site coordinator, Pharmacy and Nursing staff to successfully implement through site set up, training, and ongoing support. He was selected as a site team member for the National BCMA Collaborative Breakthrough Series to optimize BCMA use. He has also participated on various national VHA Pharmacy Benefits Management work groups (medication reconciliation as site POC, and Systems & Parameters workgroup). He also worked with Physicians, Clinical Application Coordinators, & Clinical Pharmacists to create computerized order sets for various clinical pathways such as severe sepsis, diabetes management, hypertension, and anticoagulation. In his supervisory capacity, Stephen was responsible for oversight of Pharmacy Service programs which included expansion of Clinical Pharmacy services, budget control, planning, inventory management, staffing, performance, & quality assurance activities.

Stephen is a graduate of St. John's University, College of Pharmacy and Allied Health where he earned his Bachelor of Science degree in Pharmacy. He is also the newest addition to the Barcode Resource Office, joining them as Pharmacist Consultant in October 2013.

Kevin Cownie
Information Technology Specialist
Clinical 3 Support Team/Clinical Project Support Product Development, VA

Kevin Cownie is currently an Information Technology Support Specialist with the VA. Prior to this, he was an Application Programmer for a manufacturing company and a member of the Air National Guard. He has 25 years of service with the VA which included seven years as Chief, Information Resource Management service. He joined national support as a member of the National Database Integration Team. This team was responsible for integrating numerous VA Hospital databases. Currently as a member of the Clin 3 Support Team he is responsible for supporting and releasing software for BCMA Contingency, Clinical Procedures, Functional Independence Measurement, Home Based Primary Care, Medicine, My HealtheVet, National Database Integration, QUASAR, Radiology, Spinal Cord, Suicide Hotline and VistA Imaging. He was heavily involved in the development of the BCMA Contingency package and more recently the startup of the Valley Coastal Bend Hospital along with the realignment of clinics in VISN 1.

Kirk Fox
Information Technology Specialist
Clinical 1 Support Team/Clinical Product Support Product Development, VA

Kirk Fox has 22 years of service with the Department of Veterans Affairs; he is currently a member of Clinical 1 Support Team since 2008 as an Information Technology Support Specialist. In this position, Kirk has been charged with releasing and supporting software, including but not limited to BCMA, Inpatient Medications (both Unit Dose and IV Medications), and Outpatient Pharmacy packages.

Kirk has been involved with BCMA since version 1, at a site level and as active role in the BCMA Multi-Disciplinary for VISN 2 (five Integrated VA Medical Centers in New York). Additional VISN 2 roles include Application Support and Team Lead Application Support for BCMA for VISN 2. This position provided the opportunity to work on many projects assisting in the Development of National BCMA Contingency Plan, and the creation of BCMA Reports.

Prior roles in the VA include: Nurse Service 6 years, Medical Administration Service 2 years, and Information Technology Specialist for the last 14 years.

Kirk is a firm believer in Gene Kranz's statement, "I don't care about what anything was DESIGNED to do, I care about what it CAN do."

Cathi Graves
Management Analyst, BCRO
VHA, OIA, Health Informatics

With over 27 years of VA experience, Cathi Graves is the senior Management Analyst for the BCRO. Cathi is an accomplished professional with in depth knowledge of project management, contract management, information systems training, information systems support, and hospital executive support. Ms. Graves is consistently recognized by peers for her ability to manage the strategic implementation of information technology systems within the VA. As part of the BCRO management team, Ms. Graves provides Project Management and Contract Management oversight, as well as business operations management support, overseeing the contractual aspects of the Bar Code Expansion-Positive Patient Identification (BCE-PPI) Project. Her project management and training development expertise serve as an integral part of the BCRO work efforts to assist, implement and operationalize the use of VA's BCMA and BCE-PPI applications.

Ms. Graves earned her Project Management Certificate from Baldwin Wallace College and a Master's certificate in Project Management from The George Washington University in March 2004. Ms. Graves began her VA career in 1985 at the Dallas VA Medical Center transitioning from Executive Assistant to the Associate Director to Computer Assistant within the IRM Office. In 1991, Ms. Graves transitioned to the Dallas IRM Field Office, National IRM Training Directorate, and was responsible for various Practicum Programs, planning, and delivery of VA National IRM Chiefs Conferences. She also provided oversight for the National IRM Training Program and provided contract oversight for national VMS System Management Training for IS professionals. Ms. Graves also provided National VistA Support for the Fiscal Management Team to support IFCAP, Pharmacy, and Fee Basis VistA applications.

In 1996, Ms. Graves joined EES, as the National Education Project Manager for BCMA, Voluntary Service System, Patient Advocate Tracking System, Blind Rehabilitation V5.0, Veterans Personal Finance System, VistA Blood Establishment Computer Software, and the Medical Information Security Service. Ms. Graves also

served as a National Education Project Manager for CPRS. In her Education Project Manager roles Ms. Graves was responsible for the management of all aspects of national training program development and execution. National training development and execution activities have included the delivery of training plans, objectives, and curricula, as well as overall management of SMEs/trainers and education assistant staff. In 1999, Ms. Graves was responsible for the planning and delivery of five national face-to-face training sessions for over 1,500 VA train-the-trainer staff, to support the deployment of BCMA. In her role, Ms. Graves frequently represented the Director on OI national workgroups including representatives from VACO Senior Executive offices in the establishment of goals/objectives, processes, and tools as the VA moved from VistA to a HealtheVet architecture.

Dale K. Johnson, BSN, RN
IT Specialist, Clinical Product Support Team 2
OIA, VA

Dale Johnson is currently an Information Technology Specialist with National Clinical Product Support, Department of Veterans Affairs. Prior to national support, Dale labored as a Clinical Application Coordinator at VA Salt Lake City Health Care System for 10 years. Dale was the Lead CAC and handled a variety of issues at the VA Hospital. He has previously been involved in training IHS facilities in regards to shared applications with the VA VistA health record; consults, notes, clinical reminders and his group was recognized for this support.

Dale has worked as a Registered Nurse at the Salt Lake VA Telemetry unit, Acute Medicine and Recovery. This experience gives him a working knowledge as an end user of an Electronic Medical Record. Dale Started at the VA in 1991 after 4 years in the United States Marines. He is a strong advocate for Veteran issues. In his spare time he likes reading and writing about himself in the third person or can be found camping with his family whenever time and weather permits.

Kim M. Lyttle, BS, MT(ASCP) Information Technology Specialist
Clinical 1 Support Team/Clinical Product Support
Product Development, VA

Kim Lyttle is a registered Medical Technologist and is currently an Information Technology Support Specialist with the VA. She has several years of experience as a Medical Technologist in the private sector and over 26 years of service within the VA, including six years as a Medical Technologist, and seven years as an Information Technology Specialist at Martinsburg VAMC.

Since 2000 Kim has been assigned as an Information Technology Specialist for the Clin 1 Support Team, CPS, PD, VA. Kim has been charged with releasing and supporting software, including but not limited to BCMA, Inpatient Medications (both Unit Dose and IV Medications), Pharmacy Data Management, Dental, Surgery, Drug Accountability, and Controlled Substances. Kim released BCMA Version 2.0, and was one of the primary release people for IMR IV. She has received multiple awards

and accolades for her work, especially with BCMA. She is currently working on several projects and workgroups including SQWM, IMR V,

IMR VI, Patient Safety for BCMA and Inpatient Medications, the BCMA workgroup, the Inpatient Medications Workgroup, BCE, and BCMA for IHS.

Phil Odle, MSN, RN-BC
Informatics Nurse Specialist/BCMA-Coordinator
Marion Illinois Veterans Administration Medical Center

Phil Odle obtained his Bachelor of Science in Nursing from Oklahoma Baptist University. While living in Shawnee, OK, he worked for almost ten years at Children's Hospital of Oklahoma in the Pediatric ICU and Post-Anesthesia Care Unit until 1991. During his time at Children's, he was a co-investigator on research in Parental Stressors in Neonatal and Pediatric ICU's and co-author of the published article based on that research.

He has been employed as a Registered Nurse in the VA since 1991. He began his VA career as a staff nurse in the Intensive Care Unit. He has held many positions within the facility, including ICU Nurse Manager, Clinic Float Nurse, Nursing Supervisor, and now the he is the facility BCMA-C and Informatics Nurse Specialist. He was introduced to BCMA when it was first released to the VA in 1999. Beginning with his assignment as a Train-the-Trainer for version 2, he took on additional responsibilities with BCMA. He led a BCMA Collaborative Team related to Finishing After-hours Medication Entries to assist VA facilities which did not have 24/7 Pharmacy coverage. In 2012, he was one of several coordinators to serve as Mentors for a pilot program of virtual Mentoring for new BCMA coordinators, a project that was sponsored by the VA BCRO. He obtained a Master of Science in Nursing (Nursing Informatics) degree from Walden University. He is board certified in Nursing Informatics. In addition to duties at his local facility, Mr. Odle serves on several regional and national committees and task forces, such as field-based Subject Matter Expert for the VA BCRO Oversight Board, Applied Informatics Service Issue Brief Review Team, Clinical Procedures Flowsheet Terminology team, Clinical Information Systems/Anesthesia Record Keeping team, BCMA Web-Based Training team, and Nursing Informatics Field Alliance.

Chris Saddler, RN
Information Technology Specialist
IHS OIT

Chris Saddler began working for IHS in 1980 as a Nurse Epidemiologist at the Alaska Native Medical Center. In 1984, she joined the fledgling IHS RPMS Development Team. She was responsible for the initial development of the VA's Laboratory package and instrument interfaces for IHS. Transferring to OIT National Programs in 2003, her initial assignment was upgrading the Radiology package for EHR. Other projects included the upgrade to Kernel v 8 and other infrastructure packages, PCC+, Vista Imaging, Women's Health, and serving as IHS Database Administrator for two

years. She provided technical support for EHR deployment in Alaska, and continues to support multi-division and urban sites.

Daphen Shum, BS Pharm, RPh
Pharmacy Supervisor/Informaticist (@ Perry Point Division)
BCMA Coordinator, VA Maryland Health Care System (VAMHCS)
Pharmacy Clinical Specialist, VHA PBM Clinical Informatics/Pharmacy Reengineering

Daphen Shum is a registered pharmacist working in a variety of roles within the VA. She has over 31 years of service in the VA, with a few years working as a hospital pharmacist in the private sector. Her VA career started as a Pharmacy Technician. After becoming a pharmacist, when was involved in the initial implementation of DHCP / VISTA. She was involved as an ADPAC / Informaticist soon after she started working at VAMC Perry Point in 1988, in addition to working in both the inpatient and outpatient pharmacy areas. She was involved in the implementation of BCMA in 2000 and was appointed BCMA Coordinator in 2005. She was involved on the team from VAMHCS, selected as a part of the national BCMA Collaborative Breakthrough Series, to facilitate the resolution of issues to optimize the use of BCMA. Other BCMA projects include a VISN 5 Pharmacist BCMA training initiative, BCMA Cross-Functional Team and BCMA Web-based Training Planning team. Current projects include iEHR Pharmacy SME, iEHR Bar Coding SME and BCMA for IHS.

LCDR Carla Stearle, PharmD, BCPS, NCPS
ePrescribing EHR Pharmacy Consultant
IHS, OIT

Lieutenant Commander Carla Stearle is a Commissioned Officer in the USPHS and has been in the IHS since 2004. She received her Bachelor of Science Degree in Biology from Penn State University in 2000 and her Doctor of Pharmacy degree from the University of Maryland College of Pharmacy in 2004. Carla completed a pharmacy practice residency at W.W. Hastings Cherokee Nation Indian Hospital in 2004 and remained at Hastings as a staff pharmacist until 2009. During her years at Hastings she was a member of both the local EHR implementation team and the local Medication Safety Team. She is now employed as an ARRA Pharmacy Consultant with OIT.

CAPT (ret) David R. Taylor, MHS, RPh, PA-C, RN BCMA Deployment Lead
IHS, OIT

Captain (ret) Taylor is a retired Commissioned Officer in the USPHS and is a certified physician assistant, registered pharmacist, and registered nurse. He holds more than 36 years of public health, clinical, and clinic-administrative experience in the IHS as both a commissioned officer and federal employee. Mr. Taylor has served as a pharmacist, physician assistant, quality manger, risk manager, and compliance officer for the Pine Ridge, South Dakota and Cherokee, North Carolina Indian Hospitals. He has also served as an HIV/AIDS/STD consultant, performance improvement consultant, pharmacy consultant, diabetes clinical consultant, and

RPMS health informatics consultant for the Nashville Area IHS. Since 2002 David Taylor has been assigned to the IHS OIT as a National Medical Informatics Consultant and has been charged with both training and deployment of the Meaningful Use of an EHR throughout the entire Indian Health Care system. David was awarded the PHS Meritorious Service Medal in recognition for his accomplishments in the EHR arena during his Commission.

Catherine Whaley, PMP (Contractor)
EHR and BCMA Project Manager DNC

Catherine Whaley is a DNC Project Manager based in Tucson, AZ. She holds an AAS in Accounting and an AA in General Studies from Anoka-Ramsey Community College with a PMP Certification from PMI. Her experience includes over 20 years of Information Technology including customer support, software development, design and development of classroom training documentation, training/instruction/facilitation, testing, business analysis, and project management. She has participated in the requirements gathering efforts and developed requirements for multiple applications. Since she started with IHS in 2010, she has worked as Project Lead for the 2012 Meaningful Use Certification project, Project Manager of the Stage 1 Meaningful Use Team and most recently Project Manager for the EHR Deployment and Training, eRx Deployment and BCMA projects.

Jan-Erik R. Zeller, RN-BSN, MBA-TM Education Project Manager
Employee Education System (EES), VHA

Jan-Erik Zeller is currently a Project Manager with the EES Clinical IT Applications Division charged with developing and implementing education and training plans involving various VHA clinical applications projects. He specializes in clinical applications such as the BCMA, BCE, Simulation and CPRS packages. His professional career consists of eight years of IT experience followed by eight years of working as a registered nurse in the Neuro- Trauma and Surgical ICUs and three years working as a Clinical Applications Coordinator. He has served as a Subject Matter Expect for numerous clinical applications and Root Cause Analyses. Over the years he has assisted with and presented at various health care related conferences.

Appendix A: BCMA PSB3*42 RPMS and EHR Configuration Notes

A.1 BCMA Setup at Choctaw Nation Health Services Authority

```
PACKAGE: PIMS*5.3*1018     Apr 1, 2015 12:21 pm                     PAGE 1
-----------------------------------------------------------------------------
TYPE: SINGLE PACKAGE                                   TRACK NATIONALLY: YES
NATIONAL PACKAGE: PIMS                               ALPHA/BETA TESTING: NO
DESCRIPTION:
DGPWBD and BDG* routines, BCMA IHS Options/Routines, BCMA Terminal Type and
Device file entries, BCMA BCBU Logical Link and routines.

ENVIRONMENT CHECK: BDGP18PS                          DELETE ENV ROUTINE: No
 PRE-INIT ROUTINE:                             DELETE PRE-INIT ROUTINE:
POST-INIT ROUTINE:                            DELETE POST-INIT ROUTINE:
PRE-TRANSPORT RTN:
                                UP     SEND      DATA                 USER
                                DATE   SEC.      COMES    SITE  RSLV  OVER
FILE # FILE NAME                DD     CODE      W/FILE   DATA  PTRS  RIDE
-----------------------------------------------------------------------------

3.2    TERMINAL TYPE             NO     NO        YES      MERG  NO    NO

3.5    DEVICE                    NO     NO        YES      MERG  YES   NO

53.7   BCMA BACKUP DATA          YES    YES       NO

ROUTINE:                                          ACTION:
   ALPBFRMU                                          SEND TO SITE
   ALPBHL2                                           SEND TO SITE
   ALPBINP                                           SEND TO SITE
   BDGICS1                                           SEND TO SITE
   BDGPCCL                                           SEND TO SITE
   BDGSTAT2                                          SEND TO SITE
   DGPWBD                                            SEND TO SITE
   PSBIHS1                                           SEND TO SITE
   PSBIHS2                                           SEND TO SITE
   PSBIHS3                                           SEND TO SITE
   PSBIHS4                                           SEND TO SITE
   PSBIHS5                                           SEND TO SITE
   PSBIHS6                                           SEND TO SITE

OPTION:                                           ACTION:
   PSBIHS BCMA BCBU                                  SEND TO SITE
   PSBIHS CORRECT DRUG POINTERS                      SEND TO SITE
   PSBIHS DRUG CHECK                                 SEND TO SITE
   PSBIHS DRUG IEN CHECK                             SEND TO SITE
   PSBIHS MED GIVEN NDC REPORT                       SEND TO SITE
   PSBIHS MOB DATE                                   SEND TO SITE
   PSBIHS MOB TASK                                   SEND TO SITE

HL LOGICAL LINK:                                  ACTION:
   PSB BCBU                                          SEND TO SITE

INSTALL QUESTIONS:

 Default Rebuild Menu Trees Upon Completion of Install: YES
```

```
REQUIRED BUILDS:

   PIMS*5.3*1017                                    ACTION:
                                                       Don’t install, leave
                                                       global
```

A.2 Issues from Cherokee

When a PCC Vitals date ended in zero, it was interpreted as a string rather than a numerical date. Fix was distributed in BJPC Patch 10.

```
APCDMSR1 ; IHS/CMI/LAB - Cumulative Vital Measurement Report
;;2.0;IHS PCC SUITE;**10**;MAY 14, 2009;Build 77

SETUT+3
S EVDATE=+$E(EVDATE,1,12) ;IHS/OIT/FBD - 7/16/2013 - ADDED '+' TO FORCE
SORTING BY NUMERIC DATE VALUE
```

The BCMA GUI Vitals Cumulative report erred because entries were being created with a null value. Fix was distributed in EHR Patch 12.

```
BEHOENPC ;MSC/IND/DKM - PCC Data Management
   ;;1.1;BEH COMPONENTS;**005003,005004,005005,005006,005007,005008,005009,
005010**;Sep 18, 2007

MSR+7
I XM="" S DATA=0 Q ;IHS/VA/KF 07172013 Patch for to not create measurement
for a Null Value
```

The routine %ZISTCP contained a modification for IHS Patient Chart that should be removed. Fix will be distributed in a Kernel patch.

```
%ZISTCP  ;ISC-SF/RWF - DEVICE HANDLER TCP/IP CALLS ;06/23/2004
         ;ROUTINE CONTAINS IHS MOD AT CONT+4 AND LONT+11
CONT+4
;line below changed from "-M" to "S" for GUI Patient Chart
;O NIO:(IP:SOCK:"S"::512:512):TO G:'$T NOOPN ;Make work like DSM O
NIO:(IP:SOCK:"-M"::512:512):TO G:'$T NOOPN ;Make work like DSM
;IHS/OIT/CLS 01/08/2014

LONT+11
;line below changed from "-M" to "S" to work with GUI Patient Chart
;U NIO:(::"S") ;Work like DSM
U NIO:(::"-M") ;Work like DSM;IHS/OIT/CLS 01/08/2014
```

A.3 Notes from Claremore and Cherokee Nation

An RN Finish key error was observed at Claremore and Cherokee Nation. Phil Salmon and Carlene McIntyre found that the VA experienced this same issue and addressed it in a patch. Phil made the patch mods to the routine, PSIVORFB. Fix was distributed in APSP patch 1018.

```
Cache for Windows^INT^^~Format=Cache.S~^RAW
%RO on 17 Mar 2014 1:21 PM PSIVORFB^INT^1^63263,48049^0
PSIVORFB ;BIR/MLM-FILE/RETRIEVE ORDERS IN ^PS(55 ;17-Mar-2014 13:20;DU
 ;;5.0; INPATIENT MEDICATIONS
;**3,18,28,68,58,85,110,111,120,134,213,161,1010,1015,1018**;16 DEC 97; Build 50

;           - IHS/MSC/PLS - 03/17/14 - Added change to NEW55 and LIMSTOP EP from
VistA PSJ*5.0*273
;
NEW55 ; Get new order number in 55.
 N DA,DD,DO,DIC,DLAYGO,X,Y,PSIVLIM,MINS,PSJDSTP1,PSJDSTP2,A,PSJCLIN,PSJDNM, PSJPROV,
PSJWARD,PSJPAO,PSJALRT
 I $D(^PS(55,+DFN)),'$D(^PS(55,+DFN,0)) D ENSET0^PSGNE3(+DFN)
 ;IHS/MSC/PLS - 03/17/14 - Added logic from PSJ*5.0*273
 I $G(PSJORD)["V"!($G(PSJORD)["P"),$G(P(2))]"" D
 .I '$G(PSIVSITE) S PSIVSN=$P(P("IVRM"),"^") D ENCHK^PSIVSET
 .D LIMSTOP(.PSJDSTP1,.PSJDSTP2)
```

A.4 PSBIHS Options

```
NAME: PSBIHS BCMA BCBU                  MENU TEXT: BCMA Backup Task
  TYPE: run routine                     CREATOR: SADDLER,CHRIS
  PACKAGE: BAR CODE MED ADMIN
 DESCRIPTION:   This option writes BCMA data to a HFS file. It should be
 tasked to run once an hour.
  ROUTINE: PSBIHS5                      SCHEDULING RECOMMENDED: YES
  UPPERCASE MENU TEXT: BCMA BACKUP TASK

NAME: PSBIHS CORRECT DRUG POINTERS      MENU TEXT: BCMA Drug Pointer Check
  TYPE: run routine                     CREATOR: COSEN,RICHARD L
  PACKAGE: BAR CODE MED ADMIN
 DESCRIPTION:   This option checks for consistency of drug file pointers.
 Items on this report will not scan in BCMA.

 This report looks at the following files for 'Correct Drug Pointers'
   Drug File (50
   Pharmacy Orderable Iten (50.7)
   IV Additive (52.6)
   IV Solution (52.7)
  ROUTINE: PSBIHS3
  UPPERCASE MENU TEXT: BCMA DRUG POINTER CHECK

NAME: PSBIHS DRUG CHECK                 MENU TEXT: BCMA DRUG SYNONYM CHECK
  TYPE: run routine                     CREATOR: SADDLER,CHRIS L
 PACKAGE: BAR CODE MED ADMIN
 DESCRIPTION:   This option checks the Drug file for duplicate synonyms as part
  of the Drug file cleanup for BCMA.
 ROUTINE: PSBIHS2
 UPPERCASE MENU TEXT: BCMA DRUG SYNONYM CHECK

NAME: PSBIHS DRUG IEN CHECK             MENU TEXT: BCMA DRUG IEN SYNONYM CHECK
  TYPE: run routine                     CREATOR: SADDLER,CHRIS L
 PACKAGE: BAR CODE MED ADMIN
 DESCRIPTION:  This option checks a specific drug in the Drug file using its
  IEN to search for other entries that match or contain the IEN as its synonym.
ROUTINE: SCANNER^PSBMLTS
  UPPERCASE MENU TEXT: BCMA DRUG IEN SYNONYM CHECK

NAME: PSBIHS MED GIVEN NDC REPORT       MENU TEXT: BCMA Med Given NDC Report
  TYPE: run routine                       CREATOR: SADDLER,CHRIS
```

```
  PACKAGE: BAR CODE MED ADMIN
 DESCRIPTION:  This option is a patient report by date range of medications
 administered using BCMA. It can include Order Details and/or NDC Daily Summary.
  ROUTINE: PSBIHS4
  UPPERCASE MENU TEXT: BCMA MED GIVEN NDC REPORT

NAME: PSBIHS MOB DATE
  MENU TEXT: BCMA Med Order Button by Date Range
  TYPE: run routine                     CREATOR: SADDLER,CHRIS L
  PACKAGE: BAR CODE MED ADMIN
 DESCRIPTION:  This option runs a routine that finds the med orders that were
  entered into the system using the BCMA Med Order Button in EHR/CPRS. It allows
  the user to select a date range.
  ROUTINE: PSBIHS1
  UPPERCASE MENU TEXT: BCMA MED ORDER BUTTON BY DATE

NAME: PSBIHS MOB TASK
  MENU TEXT: BCMA Med Order Button Night Task
  TYPE: run routine                     CREATOR: SADDLER,CHRIS L
 BAR CODE MED ADMIN
 DESCRIPTION:  This option runs a routine that finds the med orders that were
  entered into the system using the BCMA Med Order Button in EHR/CPRS. It does
   not allow the user to select a date range. It should be scheduled to be run daily
   after midnight and before the day shift begins. It will report the previous day's
   MOB orders.
 ROUTINE: NTASK^PSBIHS1                 SCHEDULING RECOMMENDED: YES
 UPPERCASE MENU TEXT: BCMA MED ORDER BUTTON NIGHT TA
```

A.5 TaskMan Schedule/Unschedule Option

```
PSBIHS MOB TASK BCMA Med Order Button Night Task Schedule to be run daily
after midnight. Specify printer.

                           Edit Option Schedule
   Option Name: PSBIHS MOB TASK
   Menu Text: BCMA Med Order Button Night Task           TASK ID: 5550554

   QUEUED TO RUN AT WHAT TIME: SEP 15,2013@01:00

DEVICE FOR QUEUED JOB OUTPUT: TALRXIP;P-HPIII-P12;96;58

  QUEUED TO RUN ON VOLUME SET: TAL

           RESCHEDULING FREQUENCY: 1D
```

A.6 Menu Structure

1. Place on PSJU MGR Unit Dose Medications menu:

```
BCMA  PSB PHARMACY
```

2. Place on PSB PHARMACY Medication Administration Menu Pharmacy menu:

```
BMOB  PSBIHS MOB DATE                 BCMA Med Order Button by Date Range
CDP   PSBIHS CORRECT DRUG POINTERS    BCMA Drug Pointer Check
DSYN  PSBIHS DRUG CHECK               BCMA DRUG SYNONYM CHECK
```

```
DIEN  PSBIHS DRUG IEN CHECK           BCMA DRUG IEN SYNONYM CHECK
```

3. Place on PSB NURSE Medication Administration Menu Nursing

```
BMOB  PSBIHS MOB DATE  BCMA Med Order Button by Date Range
```

4. Edit PSBO BL Label Print option:

```
Select Menu Management Option: Edit options

Select OPTION to edit:  PSBO BL  Label Print
NAME: PSBO BL// ^OUT OF ORDER MESSAGE
OUT OF ORDER MESSAGE: USE OPTION 10
LOCK: ^
```

5. Secondary Menu for All BCMA Users:

```
OR BCMA ORDER COM  OR BCMA ORDER COM VERSION 1.

PSB GUI CONTEXT-USER   BCMA Client Context
```

6. Secondary Menu for CAC/BCMA Coordinator:

```
PSB  PSB MGR    Bar Code Medication Administration Manager
 [locked with PSB MANAGER key]
```

7. Secondary Menu for BCMA Coordinator:

```
TOOL  PSB TOOL MENU ITEMS  BCMA GUI Tool Menu Items
```

8. Secondary Menu for Nurses:

```
BCMA  PSB NURSE Medication Administration Menu Nursing
```

9. Secondary Menu for Inpatient Pharmacists:

```
BCMA  PSB PHARMACY   Medication Administration Menu Pharmacy
```

10. Key for All BCMA Users:

```
PSB CPRS MED BUTTON
```

11. Key for BCMA Coordinator:

```
PSB UNABLE TO SCAN
```

12. Key for CAC/BCMA Coordinator:

```
PSB MANAGER
```

Sample RPMS Provider Setups for BCMA

Role	TIU Class1	Synonym — Secondary Menu	Keys
Physician	PHYSICIAN	<none> — PSB GUI CONTEXT USER	PSB READ ONLY
Nurse	REGISTERED NURSE	BCMA — PSB NURSE <none> — PSB GUI CONTEXT USER <none> — OR BCMA ORDER COM	PSB CPRS MED BUTTON
Pharmacist	PHARMACIST	BCMA —	<none>
BCMA Coordinator	CLINICAL COORDINATOR	BCMA — PSB NURSE *if user is a Nurse BNUR — PSB NURSE *if user is a Pharmacist <none> — PSB GUI CONTEXT USER <none> — OR BCMA ORDER COM TOOL — PSB TOOL MENU ITEMS BPHA — PSB PHARMACY *if a Nurse BCMA — PSB PHARMACY *if a Pharmacist PSB — PSB MANAGER	PSB MANAGER PSB UNABLE TO SCAN PSB CPRS MED BUTTON
Nurse Manager (not for training)	REGISTERED NURSE	BCMA — PSB NURSE <none> — PSB GUI CONTEXT USER <none> — OR BCMA ORDER COM PSB — PSB MANAGER	PSB MANAGER PSB UNABLE TO SCAN
Pharmacy Informaticist (not for training)	PHARMACIST	BCMA — PSB PHARMACY <none> — PSB GUI CONTEXT USER PSB — PSB MANAGER	PSB MANAGER PSB UNABLE TO SCAN

Revised 3/13/15 vmj/mra
Revised 7/22/15 cls/dka/mra/drt

A.7 Terminal Type

The following Terminal Type entries are available:

- P-TCP-ZEBR IV BCMA DATA MATRIX
- P-TCP-ZEBR MAR LABEL
- P-TCP-ZEBR UD BCMA DATA MATRIX
- P-TCP-ZEBR WRISTBAND ADULT
- P-TCP-ZEBR WRISTBAND INFANT
- P-TCP-ZEBR WRISTBAND PEDS

Note: P-TCP-ZEB IV BCMA DATA MATRIX was modified at Choctaw to print on 3.5 x 2 inch labels. Usual IV label is 3 x 3 inches.

A.8 Device File

The following Device entries are available:

- ZEB_IV_BCMA NIC |TCP|9100 BCMA
- ZEBRA2824 MAR LABEL NETWORK |TCP|9100 BCMA
- ZEB_UD_BCMA NIC |TCP|9100 BCMA
- ZEBRA2824 ADULT NETWORK |TCP|9100 BCMA
- ZEBRA2824 INFANT NETWORK |TCP|9100 BCMA
- ZEBRA2824 PEDS NETWORK |TCP|9100 BCMA

IV, UD, and Infant Wristband printers - $I and OPEN PARAMETERS fields modified to use Windows/DataRay software.

```
NUMBER: 194                           NAME: ZEB_IV_BCMA
   $I: |PRN|BCMA_TESTIV                VOLUME SET(CPU): TAL
   LOCATION OF TERMINAL: NIC           ASK HOST FILE: NO
   ASK HFS I/O OPERATION: NO           SUPPRESS FORM FEED AT CLOSE: YES
   OPEN COUNT: 146                     OPEN PARAMETERS: "I"
MNEMONIC: IV
   SUBTYPE: P-TCP-ZEB IV BCMA DATA MATRIX
  TYPE: TERMINAL

NUMBER: 433                           NAME: ZEB_UD_BCMA
  $I: |PRN|BCMA_TESTUD                TASKMAN PRINT A HEADER PAGE: NO
  VOLUME SET(CPU): TAL                 LOCATION OF TERMINAL: NIC
  ASK HOST FILE: NO                    ASK HFS I/O OPERATION: NO
  OPEN COUNT: 142                      OPEN PARAMETERS: "I"
MNEMONIC: UNIT DOSE
MNEMONIC: UD
   SUBTYPE: P-TCP-ZEB UD BCMA DATA MATRIX
   TYPE: TERMINAL
   LAST SIGN-ON USER (c): CHANNEL,HEATHER N

NUMBER: 434                           NAME: ZEBRA2824 INFANT
  $I: |PRN|BCMA_TEST INFANT WB        TASKMAN PRINT A HEADER PAGE: NO
  LOCATION OF TERMINAL: NETWORK       ASK HOST FILE: NO
  ASK HFS I/O OPERATION: NO           SUPPRESS FORM FEED AT CLOSE: YES
  OPEN COUNT: 1335
  OPEN PARAMETERS: "I"
MNEMONIC: WRISTBAND INFANT
  SUBTYPE: P-TCP-ZEBR WRISTBAND INFANT  TYPE: TERMINAL
```

A.9 Wristband Printer

OPEN PARAMETERS fields modified to use site-specific IP address:

```
NUMBER: 431                             NAME: ZEBRA2824 ADULT
   $I: |TCP|9100                         TASKMAN PRINT A HEADER PAGE: NO
   VOLUME SET(CPU): TAL                  LOCATION OF TERMINAL: NETWORK
   ASK HOST FILE: NO                     ASK HFS I/O OPERATION: NO
   SUPPRESS FORM FEED AT CLOSE: YES      OPEN COUNT: 1363
   OPEN PARAMETERS: ("172.16.14.88":9100:"ACS"::512:512)
```

```
MNEMONIC: WRISTBAND ADULT
   SUBTYPE: P-TCP-ZEB WRISTBAND ADULT  TYPE: NETWORK CHANNEL
```

Acronym List

Acronym	Term Meaning
ADPAC	Automated Data Processing Application Coordinator
ADT	Admission, Discharge, and Transfer
AIS	Applied Informatics Service
BCE	Bar Code Expansion
BCE-PPI	Bar Code Expansion-Positive Patient Identification
BCMA	Bar Code Medication Administration
BCRO	Bar Code Resource Office
CAH	Critical Access Hospital
CIMTAC	Clinicians' Information Management Technology Advisory Council
CMOP	Consolidated Mail Outpatient Pharmacy
CMS	Centers for Medicare and Medicaid Services
CNMC	Chickasaw Nation Medical Center
DNC	Data Networks Corporation
EES	Employee Education System
EHR	Electronic Health Record
eMAR	electronic Medication Administration Record
EP	Eligible Professional
IHS	Indian Health Service
IRM	Information Resource Management
IT	Information Technology
OIA	Office of Informatics and Analytics
OIT	Office of Information Technology
RPMS	Resource and Patient Management System
SQA	Software Quality Assurance
USPHS	U.S. Public Health Service
VA	U.S. Department of Veterans Affairs
VAMHCS	VA Maryland Health Care System
VHA	Veterans Health Administration