



RESOURCE AND PATIENT MANAGEMENT SYSTEM

BCMA Printer Remote Configuration, Test & Go-Live

Announcement and Agenda

August 3-7, 2015

Rosebud Cohort
(Rosebud, Red Lake, Bristol Bay & Crownpoint)

Office of Information Technology
Division of Information Technology

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1.0 General Information

1.1 Background

The Centers for Medicare and Medicaid Services (CMS) recently 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 specifies 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

(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.

1.2 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.

Stage 2 Eligible Hospital and Critical Access Hospital Meaningful Use Core Measure 16 of 16

Automatically track medications from order to administration using assistive technologies in conjunction with an electronic medication administration record (eMAR).

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.

Exclusion

Any eligible hospital or CAH with an average daily inpatient census of fewer than 10 patients.

1.3 Attestation Requirements

DENOMINATOR: Number of medication orders created by authorized providers in the eligible hospital's or CAH's inpatient or emergency department (POS 21 or 23) during the EHR reporting period.

NUMERATOR: The number of orders in the denominator for which all doses are tracked using eMAR.

THRESHOLD: The resulting percentage must be more than 10 percent in order for an eligible hospital or CAH to meet this measure.

EXCLUSION: Any eligible hospital or CAH with an average daily inpatient census of fewer than 10 patients.

1.4 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 the BCMA hardware to include printers, scanners, and labels; BCMA Resource and Patient Management System (RPMS) software, and BCMA client in preparation for Software Quality Assurance (SQA) certification and release. Prior to the testing, the software must be loaded on the BCMA Test Account and the BCMA Team should test the software for functionality. If the software is not functioning as designed, this severely compromises the ability to assess the software from a usability perspective.

Test patients with appropriate test orders need to be set up prior to testing. If the BCMA Test account is open to other users, the patients to be used for the usability testing should be isolated or assigned to a single ward to prevent non-testing users from inadvertently disturbing the patients reserved for testing. If necessary, ensure the test user account is already set-up with the same levels of access that he or she is assigned in the live/production account to ensure the user experience is as close to the live/production experience as possible.

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 Cross Functional Team

3.2.1 Voting Members

Last Name	First Name	Title
Curtis	Clayton, MD	VHA IHS Liaison and IT Informatics
Patillo	Jackie	Acting Executive Director for Field Operations, OIT, Department of Veterans Affairs (VA)
Ong	Howard (John)	RPMS Investment Manager, OIT, IHS
Taylor	David	BCMA Federal Lead, OIT, IHS
Alcorn	Deborah	BCMA Co-Federal Lead, OIT, IHS

3.2.2 Standing Members

Last Name	First Name	Title
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
Alcorn	Deborah	BCMA Nurse Consultant, OIT, IHS
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
Darwin	Wil	Chair, IHS National Pharmacy Council

Last Name	First Name	Title
Devlin	Vitalia	Clinical Product Support Division Director, OI&T, VA
Dial	Cornelius	Chair, Pharmacy Professional Specialty Group, IHS
Fox	Kirk	Clinical 1 Support Team, OIT, VA
Johnson	Dale	Clinical 2 Support Team, OIT, VA
Lyttle	Kim	Clinical 1 Support Team, OIT, VA
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
Kost	Vivian	MSC Contractor
Tucker	Chris	Director, BCRO, OIA, VHA
Vinokur	Ella	Enterprise Systems Management, Health Provider Systems (Janet M. Reimer - Alternate)
Von Bibra	Linda	CIMTAC Representative, Business Owner, IHS

3.3 Subject Matter Experts

3.3.1 IHS Areas with Hospitals

Last Name	First Name	Title
Bartlett	Robin	CAC, Pharmacy Consultant, Nashville Area Office
Boykin	Max	Nurse Consultant, Nashville Area Office
Campbell	Brian	Pharmacy Consultant, Phoenix Area Office
Cross	Charles	Information Technology Specialist, Oklahoma City Area Office
Crossland	Eugenia	Clinical Nurse Informaticist, Phoenix Indian Medical Center (PIMC)
Dahozy	Carol	Nurse Consultant, Phoenix Area Office
Eller	Jim	Information Technology Specialist, Cherokee Indian Hospital Authority (CIHA)

Last Name	First Name	Title
Freeze	Travis	BCMA Project Lead, Chickasaw Nation Medical Center (CNMC)
Grosfield	Cheryl	BCMA Coordinator, Choctaw Nation Health Services Authority (CNHSA)
Helm	Elizabeth	Director of Pharmacy, CIHA
Kennedy	Melissa	BCMA Coordinator, CNMC
Kuka	Verna	Information Technology Specialist, Phoenix Area Office
Lambert	Wanda	BCMA Coordinator, CIHA
Loving	Becky	Nurse Consultant, Oklahoma City Area Office
Mosely	Elvira	Clinical Applications Coordinator (CAC), Phoenix Area Office
Olson	Matt	Pharmacy Administrative Data Processing Applications Coordinator, CNHSA
Patten	Tracie	Pharmacy Consultant, Oklahoma City Area Office
Randolph	Audrine	Information Technology Specialist, CNHSA
Rubin	Amy	CAC, Oklahoma City Area Office
Simpson	Patrick	Information Technology Specialist, CNMC
Steers	Randy	Director of Inpatient Pharmacy Services, CNHSA
Toedt	Michael	Medical Director, CIHA
Von Bibra	Lynda	CAC, PIMC
Walling	Jeff	Pharmacist, PIMC
Wright	Mitch	Division of Information Resources Management Director, Nashville Area Office

3.3.2 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

3.4 Area Office BCMA Teams

3.4.1 Great Plains Area Office

Last Name	First Name	Title
Rauth	Leslye	CAC, Great Plains Area Office
Hall	Martin	Information Technology Specialist, Great Plains Area Office

3.4.2 Oklahoma City Area Office

Last Name	First Name	Title
Rubin	Amy	CAC, Oklahoma City Area Office
Loving	Becky	Nurse Consultant, Oklahoma City Area Office
Patten	Tracie	Pharmacy Consultant, Oklahoma City Area Office
Cross	Charles	Information Technology Specialist, Oklahoma City Area Office

3.4.3 Navajo Area Office

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

4.0 Agenda

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

Monday – Friday Mountain Time

Start	Topic
8:30 AM	<p>BCMA Hardware and Installation</p> <ul style="list-style-type: none"> • Delineate Access Points and Workflow for BCMA Wristband Printers • Assign PPW Secondary Menu to All Employees Identified for BCMA Wristband Workflow • Install, configure, and test BCMA printers/scanners <ul style="list-style-type: none"> – 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] <p>Finalize printer setup including printhead adjustment and move to Intended Locations</p>
	<p>BCMA End-to-End Testing</p> <ul style="list-style-type: none"> • Admit BCMA Demo Patient Trial using Delayed Orders • Order Unit Dose, IV Infusion, IV Piggyback, IVP, Transdermal, Topical, and Special Medications off the BCMA Medication Training Menu • RN Finish All Orders • Verify and Complete Medication Orders • Generate Wrist Band and “BCMA Option 10” Medication Bar Code Labels • Create Mock Medication Drawers with Labels for each Patient • Set Up Computer Work Station with Bar Code Scanner for each patient • Conduct “End-to-End” testing for both Wrist Band, IV, and Medication Bar Codes • Complete all identified and unfinished tasks
4:30 PM	Adjourn

5.0 Biographical Sketches

CAPT Deborah Burkybile Alcorn, MSN, RN, CPC

BCMA Deployment Specialist

IHS OIT

Deborah has been Registered Nurse for 35 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 27 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 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 Office of Informatics and Analytics, BCRO

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 United States Public Health Service and has been in the 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, CAC, 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 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 on provider workload. 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 Office of Informatics and Analytics, Barcode Resource Office

Stephen Corma is a registered Pharmacist serving as the Pharmacy Consultant for the U.S. Department of Veterans' Affairs Barcode Resource Office. 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 Barcode Medication Administration (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 and Parameters workgroup). He also worked with Physicians, CACs, and 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, and 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 working for the VA 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, IRM 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 HealthVet, 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 VA; 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.

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

Veterans Health Administration

Office of Informatics and Analytics

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. Cathi 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

Office of Information and Technology, VA

Dale Johnson is currently an Information Technology Specialist with National Clinical Product Support, VA. Prior to national support, Dale labored as a CAC 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. She has 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, Department of 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, Bar Code Expansion (BCE), and BCMA for IHS.

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 at 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 United States Public Health Service 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 the 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 United States Public Health Service and is a certified physician assistant, registered pharmacist, and registered nurse. He holds more than 36 years of public health, clinical, and clinico-administrative experience in the IHS as both a Commissioned Officer and Federal Employee. Mr. Taylor has served as a pharmacist, physician assistant, quality manager, 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 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.

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

A.1 Terminal Type

IV Terminal Type modified for Choctaw to print on 3.5 x 2 inch labels. Usual IV label is 3 x 3 inches.

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NAME: P-TCP-ZEB IV BCMA DATA MATRIX      RIGHT MARGIN: 60
FORM FEED: #                             PAGE LENGTH: 84
BACK SPACE: $(8)
NUMBER: 1                                CTRL CODE ABBREVIATION: FI
FULL NAME: FORMAT INITIALIZATION         CONTROL CODE: W "^XA",!, "^LH0,0^FS",!
NUMBER: 2                                CTRL CODE ABBREVIATION: SB
FULL NAME: START OF BARCODE
CONTROL CODE: W "^BY2,3.0,100,^FO500,15^BXN,,200,,,"
NUMBER: 3                                CTRL CODE ABBREVIATION: ST
FULL NAME: START OF TEXT
CONTROL CODE: W "^FO",PSJBARX,",",PSJBARY,"^A0N,25,25" S PSJBARY=PSJBARY+25
NUMBER: 4                                CTRL CODE ABBREVIATION: EB
FULL NAME: END OF BARCODE
CONTROL CODE: W !!, "^FO",450,",",115,"^A0N,20,20", "^FB200,,,C,^FD",PSJBCID,"^FS"
S" S LINE=LINE+1,PSJBARY=15
NUMBER: 5                                CTRL CODE ABBREVIATION: STF
FULL NAME: START OF TEXT FIELD           CONTROL CODE: W "^FD"
NUMBER: 6                                CTRL CODE ABBREVIATION: SBF
FULL NAME: START OF BARCODE FIELD        CONTROL CODE: W "^FD"
NUMBER: 7                                CTRL CODE ABBREVIATION: ETF
FULL NAME: END OF TEXT                   CONTROL CODE: W "^FS"
NUMBER: 8                                CTRL CODE ABBREVIATION: SL
FULL NAME: START LABEL
CONTROL CODE: W "^XA",! S PSJBARY=15,PSJBARX=60
NUMBER: 9                                CTRL CODE ABBREVIATION: EL
FULL NAME: END OF LABEL                   CONTROL CODE: W "^XZ"
NUMBER: 10                               CTRL CODE ABBREVIATION: EBT
FULL NAME: END OF BARCODE                 CONTROL CODE: W "^FS"
NUMBER: 11                               CTRL CODE ABBREVIATION: SM
FULL NAME: START OF MED ROUTE
CONTROL CODE: S PSJBARY=PSJBARY-20 W "^FO",PSJBARX,",",PSJBARY,"^A0N,25,25",!!
NUMBER: 12                               CTRL CODE ABBREVIATION: EM
FULL NAME: END OF MED ROUTE               CONTROL CODE: S PSJBARY=PSJBARY+25
NUMBER: 13                               CTRL CODE ABBREVIATION: SMF
FULL NAME: START MED ROUTE FIELD          CONTROL CODE: W "^FD"
NUMBER: 14                               CTRL CODE ABBREVIATION: EMF
FULL NAME: END MED ROUTE FIELD            CONTROL CODE: W "^FS"
NUMBER: 15                               CTRL CODE ABBREVIATION: EBF
FULL NAME: END BARCODE FIELD              CONTROL CODE: W "^FS"

NAME: P-TCP-ZEB UD BCMA DATA MATRIX      RIGHT MARGIN: 60
FORM FEED: #                             PAGE LENGTH: 84
BACK SPACE: $(8)
NUMBER: 1                                CTRL CODE ABBREVIATION: SL
FULL NAME: START LABEL                   CONTROL CODE: W !,"^XA",!, "^LH0,0^FS"
NUMBER: 2                                CTRL CODE ABBREVIATION: EL
FULL NAME: END OF LABEL                   CONTROL CODE: W "^XZ"
NUMBER: 3                                CTRL CODE ABBREVIATION: ST
FULL NAME: START TEXT
CONTROL CODE: W !,"^FO"_PSBTYPE_"^A0N,30,20^CI13^FR^FD"_TEXT_"^FS"

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NUMBER: 4                                CTRL CODE ABBREVIATION: SB
FULL NAME: START OF BARCODE
CONTROL CODE: W "^BY2,3.0,75,^FO59,80^BXN,,200,,,,^FD"_PSBBAR_"^FS" W !,"^A0N,
30,20^FB100,,,C,^FO50,160,^FD"_PSBBAR_"^FS"
NUMBER: 5                                CTRL CODE ABBREVIATION: STF
FULL NAME: START OF TEXT FIELD
CONTROL CODE: S PSBTYP=$S(PSBTLE="PSBDRUG": "20,15",PSBTLE="PSBDOSE": "20,50",P
SBTLE="PSBNAME": "275,60",PSBTLE="PSBWARD": "275,90",PSBTLE="PSBLOT": "275,120",PSB
TLE="PSBEXP": "275,150",PSBTLE="PSBMFG": "400,150",PSBTLE="PSBFCB": "275,180",1:"0,
0")
NAME: P-TCP-ZEB WRISTBAND                RIGHT MARGIN: 60
FORM FEED: #                             PAGE LENGTH: 84
BACK SPACE: $(8)
NUMBER: 1                                CTRL CODE ABBREVIATION: FI
FULL NAME: FORMAT INITIALIZATION         CONTROL CODE: W "^XA^PW203^LH0,0",!
NUMBER: 2                                CTRL CODE ABBREVIATION: SL
FULL NAME: START OF LABEL                CONTROL CODE: S DGY=510,DGX=7,CPSPID=0
NUMBER: 3                                CTRL CODE ABBREVIATION: EL
FULL NAME: END OF LABEL                  CONTROL CODE: W "^XZ"
NUMBER: 4                                CTRL CODE ABBREVIATION: STF
FULL NAME: START TEXT FIELD              CONTROL CODE: W "^FB450,1,,L,^FD"
NUMBER: 5                                CTRL CODE ABBREVIATION: ETF
FULL NAME: END TEXT FIELD                CONTROL CODE: W "^FS"
NUMBER: 6                                CTRL CODE ABBREVIATION: SHR
FULL NAME: START PID
CONTROL CODE: W "^FO",DGX,"",",DGY,"",",^FWR^A0B,20,20" S DGX=DGX+20
NUMBER: 7                                CTRL CODE ABBREVIATION: EHR
FULL NAME: END PID                       CONTROL CODE: W "^FS"
NUMBER: 8                                CTRL CODE ABBREVIATION: EB
FULL NAME: END BARCODE                   CONTROL CODE: W "^FS"
NUMBER: 9                                CTRL CODE ABBREVIATION: SBF
FULL NAME: START BARCODE FIELD           CONTROL CODE: W "^FD"
NUMBER: 10                               CTRL CODE ABBREVIATION: EBF
FULL NAME: END BARCODE FIELD             CONTROL CODE: W "^FS"
NUMBER: 11                               CTRL CODE ABBREVIATION: SLIN1
FULL NAME: START LINE 1
CONTROL CODE: W "^FO",DGX,"",",DGY,"",",^A0B,30,30" S DGX=DGX-40
NUMBER: 12                               CTRL CODE ABBREVIATION: ELIN1
FULL NAME: END LINE 1                    CONTROL CODE: W "^FS"
NUMBER: 13                               CTRL CODE ABBREVIATION: SLIN2
FULL NAME: START LINE 2
CONTROL CODE: W "^FO",DGX,"",",DGY,"",",^A0B,20,20" S DGX=DGX-20
NUMBER: 14                               CTRL CODE ABBREVIATION: ELIN2
FULL NAME: END LINE 2                    CONTROL CODE: W "^FS"
NUMBER: 15                               CTRL CODE ABBREVIATION: SLIN3
FULL NAME: START LINE 3
CONTROL CODE: W "^FO",DGX,"",",DGY,"",",^A0B,20,20" S DGX=DGX-20
NUMBER: 16                               CTRL CODE ABBREVIATION: ELIN3
FULL NAME: END LINE 3                    CONTROL CODE: W "^FS"
NUMBER: 17                               CTRL CODE ABBREVIATION: SLIN4
FULL NAME: START LINE 4
CONTROL CODE: W "^FO",DGX,"",",DGY,"",",^A0B,20,20"
NUMBER: 18                               CTRL CODE ABBREVIATION: ELIN4
FULL NAME: END LINE 4                    CONTROL CODE: W "^FS"
NUMBER: 19                               CTRL CODE ABBREVIATION: SBALL
FULL NAME: BARCODE ALL
CONTROL CODE: W "^BY2,3.0,75,^FO100,"_DGY1_"^FWR^BxB,,200,,,,"
NUMBER: 20                               CTRL CODE ABBREVIATION: EBALL
FULL NAME: END BAR ALL                   CONTROL CODE: W "^FS"
NUMBER: 21                               CTRL CODE ABBREVIATION: SB128
FULL NAME: BAR CODE 128

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CONTROL CODE: W "^BY1.5,2.0^FO35,200^BCB,40,Y,N,N"
NUMBER: 22                                CTRL CODE ABBREVIATION: EB128
FULL NAME: END BAR 128                    CONTROL CODE: W "^FS"
NUMBER: 23                                CTRL CODE ABBREVIATION: PTDT
FULL NAME: PRINT DATE
CONTROL CODE: W "^FO",DGX,"",350,"", "^A0B,20,20" S DGX=DGX-20
NUMBER: 24                                CTRL CODE ABBREVIATION: EPTDT
FULL NAME: END PRINT DATE                  CONTROL CODE: W "^FS"

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A.2 Device File

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

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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

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A.3 Wristband Printer

OPEN PARAMETERS fields modified to use site specific IP address:

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NUMBER: 431                                NAME: ZEBRA2824
$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
SUBTYPE: P-TCP-ZEB WRISTBAND                TYPE: NETWORK CHANNEL

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Acronym List

Acronym	Meaning
ADT	Admission, Discharge, and Transfer
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
CIHA	Cherokee Indian Hospital Authority
CIMTAC	Clinicians' Information Management Technology Advisory Council
CMS	Centers for Medicare and Medicaid Services
CNHS	Choctaw Nation Health Services Authority
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
OIA	Office of Informatics and Analytics
OIT	Office of Information Technology
PIMC	Phoenix Indian Medical Center
RPMS	Resource and Patient Management System
SQA	Software Quality Assurance
VA	U.S. Department of Veterans Affairs
VAMHCS	VA Maryland Health Care System
VHA	Veterans Health Administration