



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **BCMA On-Site Configuration & Test**

## **Announcement and Agenda**

August 3-8, 2015

Rosebud Comprehensive Health Care Facility  
Rosebud, SD

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 (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.

## 1.2 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 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) |
| 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                             |
| 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                         |
| 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                             |
| Kost      | Vivian     | MSC Contractor   |

| Last Name | First Name | Title  |
|-----------|------------|--|
| 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   |
| 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   |
| Zeller    | Jan        | BCMA Education Project Manager, Employee Education System (EES), OI&T, VA                          |

## 3.4 Subject Matter Experts

### 3.4.1 IHS Areas with Hospitals

| Last Name | First Name | Title   |
|-----------|------------|---|
| Bartlett  | Robin      | Clinical Applications Coordinator, 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)  |
| 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  |

| Last Name | First Name | Title  |
|-----------|------------|--|
| Kuka      | Verna      | Information Technology Specialist, Phoenix Area Office                       |
| Lambert   | Wanda      | BCMA Coordinator, CIHA   |
| Loving    | Becky      | Nurse Consultant, Oklahoma City Area Office                                  |
| Mosely    | Elvira     | Clinical Application Coordinator, 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        | Clinical Applications Coordinator, 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      | Clinical Application Coordinator, PIMC                                       |
| Walling   | Jeff       | Pharmacist, PIMC   |
| Wright    | Mitch      | Division of Information Resources Management Director, Nashville Area Office |

### 3.4.2 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    |

## 3.5 Area Office BCMA Teams

### 3.5.1 Great Plains Area Office

| Last Name | First Name | Title   |
|-----------|------------|---|
| Rauth     | Leslye     | Clinical Applications Coordinator, Great Plains Area Office |
| Hall      | Martin     | Information Technology Specialist, Great Plains Area Office |

### 3.5.2 Oklahoma City Area Office

| Last Name | First Name | Title  |
|-----------|------------|--|
| Rubin     | Amy        | Clinical Applications Coordinator, 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 |

### 3.5.3 Navajo Area Office

| Last Name   | First Name | Title   |
|-------------|------------|---|
| Ray         | Kathy      | Clinical Applications Coordinator, 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 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.

### Monday

| Start   | Topic  |
|---------|--|
| 8:30 AM | <p>At the end of this session participants should be able to:</p> <ul style="list-style-type: none"> <li>• Conduct a Virtual Emergency Room, Day Surgery, Inpatient Surgical Suite, Labor &amp; Delivery, Obstetrics Post-Partum, and Inpatient Wards Admission and Medication Administration Assessment.</li> <li>• Examine the Admission, Discharge, and Transfer process</li> <li>• Examine Observation Beds utilization</li> <li>• Admission, Discharge, and Transfer (ADT) Patient Status Changes [PDF - 19 KB]<br/><a href="http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/re_sources/ADT_PatientStatusChanges.pdf">http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/re_sources/ADT_PatientStatusChanges.pdf</a></li> <li>• Examine ADT Inpatient Ward and Assignment of Beds Configuration to include Obstetrics, Newborns, and Day Surgery</li> <li>• Reconfigure Delayed Orders and Auto Discontinuation or Orders to align with Emergency Department, Ambulatory Clinic, Observation Bed Utilization, and CMS 2-Midnight Rule</li> <li>• Examine the BCMA Performance Improvement Checklist and apply to the BCMA Configuration and Test Process<br/><a href="http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/re_sources/BCMAPracticeImprovementAssessment.pdf">http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/re_sources/BCMAPracticeImprovementAssessment.pdf</a></li> <li>• Examine the ThinkTank® entries and apply to the BCMA Configuration and Test Process</li> <li>• Survey Performance Improvement data as it applies to the Medication Administration Process</li> <li>• Delineate the Medication Administration Process as it applies to BCMA and eMAR</li> <li>• Test the Converted IV Continuous and IV Intermittent as delineated in the EHR Version 1.1 Patch Note</li> <li>• Review Configuration of IV Continuous and IV Piggyback Medications</li> <li>• Configure Omnicell/Pyxis User Option<br/><a href="http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/re_sources/RPMS_OmnicellPyxisConfiguration.pdf">http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/re_sources/RPMS_OmnicellPyxisConfiguration.pdf</a></li> </ul> |
| 5:00 PM | Adjourn  |

**Tuesday**

| <b>Start</b>    | <b>Topic</b>   |
|-----------------|--|
| <b>8:30 AM</b>  | <p><b>BCMA Hardware and Installation</b></p> <ul style="list-style-type: none"> <li>• Install, configure, and test BCMA printers/scanners – (if possible will attempt remote configuration with each site prior to onsite configuration): <ul style="list-style-type: none"> <li>– Plug in scanner and scan setup card (each scanner has its own card).<br/><b>Note:</b> Cards need to be retained in order to obtain warranty service and to reconfigure scanners as needed.</li> <li>– Install BCMA barcode wristband printer.[ZEBRA2824]</li> <li>– Test Using PRINT PATIENT WRISTBAND [DGPW PATIENT WRISTBAND PRINT].</li> <li>– Install, configure, and test BCMA IV Label Printer [ZEB_IV_BCMA]. <ul style="list-style-type: none"> <li>• Test using INDIVIDUAL LABELS (IV) [PSJI LBLI].</li> <li>• Install, configure and test BCMA UD Label Printer [ZEB_UD_BCMA]</li> <li>• Test using Barcode Label Print [PSBO BZ]</li> </ul> </li> </ul> </li> <li>• Finalize printer setup including printhead adjustment and move to Intended Locations</li> </ul> |
| <b>11:30 AM</b> | <b>Lunch</b>   |
| <b>1:00 PM</b>  | <p><b>BCMA GUI Software Installation</b></p> <p><a href="http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/bcma0300.42i.pdf">http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/bcma0300.42i.pdf</a></p> <ul style="list-style-type: none"> <li>• Install BCMA GUI on all workstations. (Requires Administrator Privileges): <ul style="list-style-type: none"> <li>– BCMA Software and Documentation are provided by SQA as a controlled release.</li> <li>– BCMA Client Install:<br/>Unzip Broker_BCMA_42.zip<br/>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).</li> <li>– Test BCMA Client and BCMA Parameters Applications.</li> </ul> </li> </ul> <p><b>Note:</b> When directed BCMA is activated by checking PSB Online (or set parameter PSB Online to “Yes”).</p>   |
| <b>5:00 PM</b>  | <b>Adjourn</b>   |

**Wednesday**

| Start    | Topic   |
|----------|---|
| 8:30 AM  | <p><b>BCMA PSB3*42 RPMS and EHR Configuration</b></p> <ul style="list-style-type: none"> <li>• Associate Nursing Units with MAS Wards (ADT): <ul style="list-style-type: none"> <li>– Using Enter/Edit of FileMan NURS LOCATION file #211.4 (Create nursing unit names) and Match with the WARD LOCATION file #42.</li> </ul> </li> </ul> <p><b>Note:</b> Assess the Staffing, Geography, and Location of the Nursing Units to be able to combine reports.</p> <p><b>Note:</b> Refer to the VA Nursing Package Documentation pages 17-23 regarding Nurse Location set-up and Ward Activation:<br/> <a href="http://www.va.gov/vdl/documents/Clinical/Nursing/nurs4_um.pdf">http://www.va.gov/vdl/documents/Clinical/Nursing/nurs4_um.pdf</a></p> <ul style="list-style-type: none"> <li>• Create a Mock Medication Entry for a demo patient in the BCMA Medication Log: <ul style="list-style-type: none"> <li>– Using Enter/Edit of FileMan, in file #53.79 BCMA MEDICATION LOG.</li> <li>– 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.</li> </ul> </li> <li>• Create RPMS MailMan group and members “BCMA Issues” for: <ul style="list-style-type: none"> <li>– BCMA order problems.</li> <li>– BCMA missing doses.</li> <li>– Make the Mailman group type: Public.</li> <li>– Consider including one or more printers as part of the group.</li> </ul> </li> <li>• Configure the EHR Parameter ORWRP REPORT LIST to Include BCMA Reports: <ul style="list-style-type: none"> <li>– ORRP BCMA MAH.</li> <li>– ORRP BCMA MED LOG.</li> </ul> </li> <li>• 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</li> <li>• Confirm that TaskMan is running.</li> <li>• Listener XWBTCP on PORT for Broker Access must be running: <ul style="list-style-type: none"> <li>– Menu [XWB MENU].</li> <li>– Confer with RPMS site manager to identify the port number.</li> </ul> </li> <li>• Ensure proper configuration with matching Station Number/Facility Number in: <ul style="list-style-type: none"> <li>– INSTITUTION file #4</li> <li>– MEDICAL CENTER DIVISION file #40.8</li> <li>– STATION NUMBER (TIME SENSITIVE) file #389.9</li> </ul> </li> <li>• Ensure that each Ward Location has both Institution and Medical Center Division assigned.</li> <li>• 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. <ul style="list-style-type: none"> <li>– Prompt for Injection Site in BCMA//Yes (IVPB, IV Push, IM, SQ, SC)</li> <li>– Display in IV IVPB Tab in BCMA//Yes (IVPB, IV Push)</li> <li>– Review <b>Flag</b> and <b>Package</b> for IVPB, IV Push, IM, SQ, and SC.</li> </ul> </li> </ul> |
| 12:30 PM | Lunch   |

| Start   | Topic   |
|---------|---|
| 1:30 PM | <p><b>BCMA Site Parameter GUI Configuration</b></p> <p><a href="http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/BCMA_SiteParameterGUIConfiguration.pdf">http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/BCMA_SiteParameterGUIConfiguration.pdf</a><br/> <a href="http://www.va.gov/vdl/application.asp?appid=84">http://www.va.gov/vdl/application.asp?appid=84</a></p> <p>Configure BCMA GUI Parameter Tabs for:</p> <ul style="list-style-type: none"> <li>• Facility Tab: Check the BCMA On-Line box</li> <li>• Parameters Tab:             <ul style="list-style-type: none"> <li>- Output Devices: The print out can be defined at the division level only using the GUI</li> <li><b>Note:</b> PSB PRINTER MISSING DOSE may be set for the following:                     <pre style="background-color: #f0f0f0; padding: 5px;"> 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: [You Can Define your Printer of Choice]</pre> </li> <li>- Mail Groups</li> <li>- Reports</li> <li>- Bar Code Options</li> <li>- 5 Rights Override</li> <li>- Administration: require e-Sig to administer? (Suggest "No")</li> <li>- Allowable time limit (in minutes):                             <ul style="list-style-type: none"> <li>• Scheduled admin time before (suggest 60 min)</li> <li>• Scheduled admin time after (suggest 60 min)</li> <li>• PRN effectiveness entry within (suggest 240 min)</li> </ul> </li> <li>- Virtual due list default times: (suggest 1 hour before and 1 hour after)</li> <li>- Include Schedule Types</li> <li>- Miscellaneous options:                             <ul style="list-style-type: none"> <li>• Allowable server-client clock variance</li> <li>• BCMA time out (suggest 15 minutes)</li> </ul> </li> </ul> </li> <li>• Default Answer Lists tab:             <ul style="list-style-type: none"> <li>- Injection sites</li> <li>- Reasons given PRN</li> <li>- Reasons held</li> <li>- Reasons refused.</li> <li><b>Note:</b> Refer to the BCMA Manager Manual for default answer list suggestions: <a href="http://www.va.gov/VDL/documents/Clinical/Pharm-Bar Code Med Admin (BCMA)/psb_3_man_um_r1213.pdf">http://www.va.gov/VDL/documents/Clinical/Pharm-Bar Code Med Admin (BCMA)/psb_3_man_um_r1213.pdf</a></li> </ul> </li> <li>• IV Parameters:             <ul style="list-style-type: none"> <li>- Location, IV Type, Prompts</li> </ul> </li> </ul> |
| 5:00 PM | <b>Adjourn</b>  |

### Thursday

| Start    | Topic  |
|----------|--|
| 8:30 AM  | <p><b>Drug File, Medication Quick Orders, and Medication Quick Order Menus</b></p> <p><a href="http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/BCMA_InpatientMedicationsMenus.pdf">http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/BCMA_InpatientMedicationsMenus.pdf</a></p> <p><a href="http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/BCMA_Inpatient_OB-GYN_Menu.pdf">http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/BCMA_Inpatient_OB-GYN_Menu.pdf</a></p> <p>At the end of this session participants should be able to:</p> <ul style="list-style-type: none"> <li>• Complete drug file clean up as needed for training scenarios and create BCMA Medication Quick Orders and Menus           <ul style="list-style-type: none"> <li><b>Note:</b> See Appendix A</li> <li>– Create Medication Menu Headers.</li> <li>– Create Medication Quick Orders.</li> <li>– Hang the Medication Quick Orders to the Medication Menus.</li> </ul> </li> <li>• Create 10-12 Demo, Patient BCMA patients for testing and training:           <ul style="list-style-type: none"> <li>– Demo, Patient BCMA <b>Trial</b> (to be used for all testing during configuration, test, training, and go-live). Note: “<b>Test</b>” will no longer work with EHR Patch 12.</li> <li>– Demo, Patient BCMA Alpha</li> <li>– Demo, Patient BCMA Bravo</li> <li>– Demo, Patient BCMA Charlie</li> <li>– Demo, Patient BCMA Delta</li> <li>– Demo, Patient BCMA Echo</li> <li>– Demo, Patient BCMA Fox</li> <li>– Demo, Patient BCMA Golf</li> <li>– Demo, Patient BCMA Hotel</li> <li>– Demo, Patient BCMA <b>Instructor</b> (to be used by BCMA Instructor during configuration, test, training, and go-live)</li> <li>– Demo, Patient BCMA Juliet</li> <li>– Demo, Patient BCMA Kilo</li> <li>– Demo, Patient BCMA Lima</li> <li>– Demo, Patient BCMA Mike</li> <li>– Demo, Patient BCMA November</li> <li>– Demo Patient BCMA Oscar</li> <li>– Demo Patient BCMA Papa</li> <li>– Admit demo patients BCMA to inpatient unit.</li> </ul> </li> <li>• Enter and finish medication orders as needed for testing and training scenarios.</li> <li>• Validate system setup is adequate for BCMA testing and training.</li> </ul> |
| 12:30 PM | Lunch  |

| Start    | Topic  |
|----------|--|
| 1:00 PM  | <p><b>BCMA Clinical User Accounts</b></p> <p><a href="http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/BCMA_RPMS_ProviderSetup.pdf">http://www.ihs.gov/bcma/includes/themes/newihstheme/display_objects/documents/resources/BCMA_RPMS_ProviderSetup.pdf</a></p> <p>At the end of this session participants should be able to:</p> <ul style="list-style-type: none"> <li>• Assign BCMA Secondary Menus: <ul style="list-style-type: none"> <li>– OR BCMA ORDER COM (Med Order Button)</li> <li>– PSB NURSE (Medication Administration Menu Nursing)</li> <li>– PSB PHARMACY (Medication Administration Menu Pharmacy)</li> <li>– PSB MGR (Bar Code Medication Coordinator/Administration Manager)</li> <li>– PSB GUI CONTEXT to each BCMA User</li> </ul> </li> <li>• Allocate BCMA Keys: <ul style="list-style-type: none"> <li>– PSB CPRS MED BUTTON for each User</li> <li>– PSB MANAGER to BCMA Coordinator and Nurse Managers</li> </ul> </li> <li>• Load PIMS patch 1017 which includes the routine DGPWBD that contains the printer directions for printing the Wrist Band Bar Code, routine DGPMV, three Terminal Type and Device file entries for the IV, UD and Wrist Band Printers, and five options: <ul style="list-style-type: none"> <li>– BCMA Med Order Button by Date Range</li> <li>– BCMA Med Order Button Night Task</li> <li>– BCMA Drug Synonym Check</li> <li>– BCMA Drug iEN Synonym Check</li> <li>– BCMA Drug Pointer Check</li> </ul> </li> <li>• Modify routine APCDMSR1. This will later be distributed in BJPC patch 10.</li> <li>• Load EHR patch 12 to bring in routine BEHOENPC</li> <li>• Modify routine %ZISTCP. This will later be distributed in a Kernel patch.</li> <li>• Additional Keys for Pharmacists, Students, and Instructors will be assessed on a Site-by-Site Basis.</li> </ul> |
| Whenever | <b>Adjourn – Whenever All Preparation Tasks Are Completed</b>  |

### Friday and Saturday

| Start    | Topic   |
|----------|---|
| 8:30 AM  | <p><b>BCMA Configuration, Test, and Super End User &amp; Coordinator Training Final Preparation</b></p> <ul style="list-style-type: none"> <li>• Admit BCMA Demo Patients</li> <li>• Order Unit Dose, IV Infusion, IV Piggyback, IVP, Transdermal, Topical, and Special Medications off the BCMA Medication Training Menu</li> <li>• Pharmacy Verify and Complete Medication Orders</li> <li>• Generate Wrist Band and Medication Bar Code Labels</li> <li>• Create Mock Medication Drawers with Labels for each Patient</li> <li>• Set Up Computer Work Stations with Bar Code Scanner for each patient</li> <li>• Conduct “End-to-End” testing for both Wrist Band and Medication Bar Codes</li> <li>• Prepare to configure each student for “Demo Mode Only” prior to each Super End User Class</li> <li>• Complete all identified and unfinished tasks</li> </ul> |
| Whenever | <b>Adjourn – Whenever All Preparation Tasks Are Completed</b>   |

## 5.0 Biographical Sketches

**CAPT Deborah Burkybile Alcorn, MSN, RN, CPC**

**BCMA Deployment Specialist**

**IHS OIT**

Deborah has been a 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 Indian Health Service. 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, Indian Health Service 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 Indian Health Service Electronic Health Record 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 Indian Health Service, 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, Bar Code Resource Office**

**U.S. Department of Veterans Affairs**

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 U.S. Department of Veterans Affairs'

Bar Code Resource Office providing nursing informatics support and education to staff at the national level supporting over 150 VA medical centers. Prior to joining the Bar Code Resource Office, 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 (HIMSS), 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 Indian Health Service 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.

**Jaclyn Bloch**

**Information Technology Specialist**

**Clinical 1 Support Team/Clinical Product Support**

**Product Development, Department of Veterans Affairs**

Jaci is currently working as an Information Technology Support Specialist with the Department of Veterans Affairs. 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, Department of Veterans Affairs**

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****Data Network Corporation (DNC)**

Sean Cook is an Applications Systems Analyst with DNC and has worked on contract with the Indian Health Service 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****U.S. Department of Veterans Affairs**

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 & 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, Department of Veterans Affairs**

Kevin Cownie is currently an Information Technology Support Specialist with the Department of Veterans Affairs. Prior to working for the Department of Veterans Affairs 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 Department of Veterans Affairs 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, Department of Veterans Affairs**

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.

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, Bar Code Resource Office****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, Department of Veterans Affairs**

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, Department of Veterans Affairs**

Kim Lyttle is a registered Medical Technologist and is currently an Information Technology Support Specialist with the Department of Veterans Affairs. She has several years of experience as a Medical Technologist in the private sector. She has over 26 years of service within the Department of Veterans Affairs, 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, 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 (@ 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 Indian Health Service 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 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 Indian Health Service. Since 2002 David Taylor has been assigned to the Indian Health Service OIT as a National Medical Informatics Consultant and has been charged with both training and deployment of the Meaningful Use of an Electronic Health Record 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 BCMA Setup at Choctaw Nation Health Services Authority

```

PACKAGE: PIMS*5.3*1018          Jan 21, 2015 12:21 pm          PAGE 1
-----
TYPE: SINGLE PACKAGE              TRACK NATIONALLY: YES
NATIONAL PACKAGE: PIMS            ALPHA/BETA TESTING: NO

DESCRIPTION:
DGPWBD routine, BCMA IHS Options/Routines, BCMA Terminal Type and Device
file entries, BCMA BCBU routines and Logical Link.

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   YES   YES   NO
      DATA

ROUTINE:                                ACTION:
ALPBFRMU                                SEND TO SITE
ALPBHL2                                  SEND TO SITE
ALPBINP                                  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 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

```

## 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 will be 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 will be 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 will be distributed in APSP patch 1018. Until that is released, it is necessary to upload our modified routine.

```
EBCI>D ^%RI

Input routines from Sequential
Device: C:\PSIVORFB.RSA
Parameters? "RS" =>

File written by Cache for Windows using %RO on 17 Mar 2014 1:21 PM
```

```

with extension INT and with description:

( All Select Enter List Quit )

Routine Input Option: ALL Routines

If a selected routine has the same name as one already on file,
shall it replace the one on file? No => Yes
Recompile? Yes => Yes
Display Syntax Errors? Yes => Yes

PSIVORFB.INT^@

1 routine processed.

```

```

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 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 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

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

```

## 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

### A.6.1 Place on PSJU MGR Unit Dose Medications Menu:

```
BCMA PSB PHARMACY
```

### A.6.2 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
```

### A.6.3 Place on PSB NURSE PSB NURSE Medication Administration Menu Nursing

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

### A.6.4 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: ^
```

### A.6.5 Secondary Menu for All BCMA Users:

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

PSB GUI CONTEXT-USER BCMA Client Context
```

### A.6.6 Secondary Menu for CAC/BCMA Coordinator:

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

### A.6.7 Secondary Menu for BCMA Coordinator:

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

### A.6.8 Secondary Menu for Nurses:

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

### A.6.9 Secondary Menu for Inpatient Pharmacists:

BCMA PSB PHARMACY Medication Administration Menu Pharmacy

### A.6.10 Key for All BCMA Users:

PSB CPRS MED BUTTON

### A.6.11 Key for BCMA Coordinator:

PSB UNABLE TO SCAN

### A.6.12 Key for CAC/BCMA Coordinator:

PSB MANAGER

### A.6.13 Sample RPMS Provider Setups for BCMA

| Role   | TIU Class1              | Secondary Menu   | Keys   |
|--|-------------------------|--|--|
| Physician                                    | PHYSICIAN               | PSB GUI CONTEXT USER                                   | PSB READ ONLY  |
| Nurse  | REGISTERED NURSE        | PSB NURSE<br>PSB GUI CONTEXT USER<br>OR BCMA ORDER COM | PSB CPRS MED BUTTON                                      |
| Pharmacist                                   |                         | PHARMACIST   | PSB PHARMACY<br>PSB GUI CONTEXT<br>USER                  |
| BCMA Coordinator                             | CLINICAL<br>COORDINATOR | PSB NURSE<br>PSB GUI CONTEXT USER<br>OR BCMA ORDER COM | PSB MANAGER PSB<br>UNABLE TO SCAN<br>PSB CPRS MED BUTTON |
| Nurse Manager (not<br>for training)          | REGISTERED NURSE        | PSB NURSE<br>PSB GUI CONTEXT USER<br>OR BCMA ORDER COM | PSB MANAGER<br>PSB UNABLE TO SCAN                        |
| Pharmacy Informaticist<br>(not for training) | PHARMACIST              | PSB PHARMACY<br>PSB GUI CONTEXT USER                   | PSB MANAGER<br>PSB UNABLE TO SCAN                        |

## 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 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 and UD 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

```

## A.9 Wristband Printer

OPEN PARAMETERS fields modified to use site specific IP address:

```
NUMBER: 431                                NAME: ZEBRA2824 ADULT
$! : |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 | 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                                 |