



RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **Bar Code Medication Administration RN Finish**

## **Announcement and Agenda**

February 18 – 20, 2014

IHS Office of Information Technology  
Cherokee Nation Health Services  
Claremore PHS Indian Hospital  
Chinle Comprehensive Health Care Center  
South East Alaska Regional Health Consortium

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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 (CEHRT) 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 Definition of Terms

**electronic Medication Administration Record (eMAR):** Technology that automatically documents the administration of medication into certified EHR technology using electronic tracking sensors (for example, radio frequency identification (RFID)) or electronically readable tagging such as bar coding).

**Average daily inpatient census:** The total number of patients admitted during the previous calendar year divided by 365 (or 366 if the previous calendar year is a leap year).

## 1.4 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.

## 1.5 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 Training

BCMA is an integral part of the Electronic Health Record. Nurses administer medications, including IV piggy-back medications and IV large-volume medications through BCMA. All information is documented with a time stamp for improved accuracy of clinical information. The documented administration information is available throughout the medical center to any clinician or pharmacist as part of the integrated health record. Pharmacy and nursing staff members must collaborate closely with information management staff, if the medication administration arm of a hospital care system is to work optimally; just as rapid computer response time is crucial to the success of a computerized medication administration system. The purpose of this activity is to provide BCMA training to the BCMA Super User.

### 2.1 BCMA Coordinator

The BCMA Coordinator is responsible for developing and implementing processes to improve the safety, efficacy, and efficient of medication management processes associated with BCMA. BCMA Coordinators need to understand how the software functions and how pharmacy's finishing of orders affects what appears in BCMA. Coordinator responsibilities include but are not limited to:

- Acts as a liaison between the IHS Bar Code Resource Office and facility level management.
- Serves as a liaison between administration, clinical staff, and IT regarding BCMA medication management process.
- Monitors and reports effectiveness of change outcomes to local management and national oversight groups.
- Recommends local procedural and policy changes as appropriate.
- Test and verifies updates, patches, and new releases of BEMC prior to activation.
- Disseminates information to end users on policies and procedures.
- Facilitates training, installation, maintenance, and overall use of BCMA throughout the hospital.
- Provides user support to nursing, pharmacy, and other service lines by troubleshooting operational issues.
- Plans and ensures initial ongoing training for all BCMA users, students, and temporary staff.
- Designs, develops, updates, and maintains training documents within the facility.
- Actively participates in local facility multidisciplinary committee.
- Participates in the national BCMA conference calls and training initiatives.
- Develops, implements, and monitors a performance improvement plan for the medication management process as it relates to BCMA.

## 2.2 BCMA Multidisciplinary Committee

The BCMA Multidisciplinary Committee provides ongoing multidisciplinary support to implement any necessary changes to improve the proper use of the software, affect oversight and maintenance of equipment, and provide guidance on business-related processes. This committee should meet monthly to resolve BCMA issues and is often a sub-committee of the Pharmacy and Therapeutics Committee. The BCMA Multidisciplinary Committee which comprise end users and affiliates who can act as change agents at the local facility. Both the BCMA Coordinator and BCMA Multidisciplinary Committee work together to ensure patient safety is optimized, and this teamwork is central to BCMA success.

BCMA Multidisciplinary Committee Responsibilities include but are not limited to:

- Oversee medication manage process and interdependencies
- Create accountability and an ownership approach to BCMA use
- Guide facility or health care direction
- Assess, treats, and standardizes clinic, technical and operational direction
- Recommend policy and procedural changes to optimize BCMA use
- Centralize and streamlines systems and process channels
- Provide guidance to facility sponsors and end users
- Support and maintains best practice models
- Provide early warning of performance deficiencies and makes recommendations for improving performance to achieve business results
- Facilitate alignment of BCMA performance objectives with facility or health care system strategic goals

BCMA Multidisciplinary Committee Membership should include:

- BCMA Coordinator
- Clinical applications coordinator
- End users authorized to administer medications
- Information technology
- Inpatient pharmacy
- Union representatives if applicable
- Performance improvement
- Patient safety
- Respiratory therapy (if applicable)
- Chief of medical staff
- Nurse management

## 2.3 BCMA End User and Super User

A BCMA End User is an individual who uses BCMA for medication administration in a patient care setting.

A BCMA Super User is an individual who uses BCMA for medication administration in a patient care setting and also serves as a support resource to other BCMA users.

Verified medication orders become available in the nursing staff's point-of-care BCMA. The Virtual Due List (VDL) is the electronic counterpart of an electronic Medication Administration Record (eMAR), and is used to display medications and the appropriate administration time frame for each. Medications may be scanned and administered, following a medication orders verification by an end user nurse authorized to administer medications.

As a handheld bar code reader registers each medication, the software verifies the correct medication was ordered, administered on time, and measured in the correct dosage, while at the same time documenting the actual administration of the medication. This process ensures the *Five Rights* universal standard of medication administration is maintained. Once the medication administration procedure has been completed for a particular timeframe, the nurse uses the Missed Medication function to generate a report of omitted medications and takes steps to resolve any reported discrepancies.

Recording and reporting features of BCMA include:

- **Virtual Due List (VDL):** Records medications that need to be administered to a patient within the specific time parameters. These include active Continuous, PRN, On-Call, One-Time medication orders.
- **Due List Report:** Provides detailed information about active and future Unit Dose and IV Medication orders that are due for administering to a patient, within a specific timeframe during a 24-hour period.
- **Medication Administration History (MAH) Report:** Lists the patient's Unit Dose and IV medication orders and any actions taken on the order.
- **Medication Log Report:** Displays a detailed history of actions taken on a patient's medication orders.
- **Missing Dose Requests:** Automatically alerts Pharmacy personnel of a Missing Dose order by printing requests for reissuing on a designated printer in the Pharmacy. This method minimizes the nurses' workload disruption to the Pharmacy and Nursing workflow. An email notification is also sent from the BCMA to the Pharmacy when a Missing Dose Request is submitted by a clinician.
- **Missed Medications Report:** Includes Continuous and One-Time Unit Dose and IV Piggyback medications that were not administered to a patient during a medication pass, within a specific timeframe, during a 24-hour period. This Report also includes Missing Dose Requests submitted to the Pharmacy.

- **PRN Effectiveness List:** Identifies PRN or *as needed* medication doses that require Effectiveness comments after they are given.
- **Medication Variance Log:** Logs medications given outside the medication administration window as Early or Late (depending on the site parameter settings), including the time it was scanned, and the reason it was administered early or late, any comments from the nurse, late PRN Effectiveness documentation, and event totals and percentages.
- **Patient Record Flag (PRF) Report:** Prints detailed information about any active PRF assignments associated with the current patient record.
- **Cover Sheet-Medication Overview Report:** Displays and groups active, expired or discontinued, and future expiring orders.
- **Cover Sheet-PRN Overview Report:** displays and groups active, expired or discontinued and future expiring orders with a schedule type of PRN for the current patient or by selected patients on a ward. For each group, the total number of orders per group is displayed in brackets next to the group heading.
- **Cover Sheet-IV Overview Report:** Displays and groups IV bag information on active, expired, and discontinued orders for the current patient or by selected patients on a ward. For each group, the total number of IV bags per group is displayed in brackets next to the group heading.
- **Cover Sheet-Expired/DC'd/Expiring Orders Report:** Displays and groups expired and discontinued orders, as well as orders that will expire for the current patient or by selected patients on a ward. For each group, the total number of IV bags per group is displayed in brackets next to the group heading.
- **Medication Therapy Report:** Includes information similar to the Medication History Report but does not require a patient record to be open. The report allows searching by VA Drug Class, Orderable Item, or Dispense Drug within a specified date range and selected search criteria. This report can be run for the current patient or by selected patients on a ward.
- **IV Bag Status Report:** Provides status on IV bags, excluding available bags, by patient or by selected patients on a ward. This report allows the user to include/exclude completed, infusing, stopped, missing, held and refused IV bags. In addition, the user can include bags for which no action has been taken on order.
- **Unable to Scan (Detailed) Report:** Provides detailed information related to each *unable to scan* event for a selected ward/nurse unit, or for all wards. The report includes patient, date/time of unable to scan event, location, type of bar code failure, drug, user's name, reason for scanning failure and optional comments. The user can specify report selection criteria including start and stop date/time, type of scanning failure, and the unable to scan reason, in addition to up to three levels of sort fields.

- **Unable to Scan (Summary) Report:** Provides totals and percentages of wristband and medication bar codes scanned and when scanning is bypassed. The report will include totals and percentages for total wristband scanned, total wristbands bypassed, total medications scanned, and total medications bypassed. The user will be able to print the reports for the entire facility, by nurse unit/location or by ward.

## 3.0 VA-IHS BCMA Cross-Functional Team

### 3.1 Co-Chairs

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

### 3.2 CFT Voting Members

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

### 3.3 Cross Functional Team 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, 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

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
Taylor	Phil	BCMA Nurse Consultant, 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
Zeller	Jan	BCMA Education Project Manager, Employee Education System (EES), OI&T, VA

### 3.4 Subject Matter Experts (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
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

Last Name	First Name	Title
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

### 3.5 Subject Matter Experts (VA – BCMA)

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

### 3.6 Phoenix Area Office BCMA Team

Last Name	First Name	Title
Mosely	Elvira	Clinical Applications Coordinator, Phoenix Area Office
Dehozy	Carol	Nurse Consultant, Phoenix Area Office
Tonrey	Lisa	Pharmacy Consultant, Phoenix Area Office
Tennyson	Shawn	Information Technology Specialist, Phoenix Area Office

### 3.7 Oklahoma City Area Office BCMA Team

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

### 3.8 Navajo Area Office BCMA Team

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

### 3.9 Northern Plains Area Office BCMA Team

Last Name	First Name	Title
Rauth	Leslye	Clinical Applications Coordinator, Northern Plains Area Office
Dale	Knutson	Nurse Consultant, Northern Plains Area Office
		Pharmacy Consultant, Northern Plains Area Office
Hall	Martin	Information Technology Specialist, Northern Plains Area Office

## 4.0 Detailed Agenda

### All Times are Central Time Tuesday

<b>10:00 AM</b> to <b>1:00 PM</b>	<b>BCMA RN Finish Key Training (Session 1)</b> At the end of this session participants should be able to: <ul style="list-style-type: none"> <li>• Provide an overview of Bar Code Medication Administration (BCMA) Process</li> <li>• Examine the practical utilization of the RPMS “RN Finish”               <ul style="list-style-type: none"> <li>– Define “RN Finish” as it applies to BCMA</li> <li>– Compare and contrast reasons for using the “RN Finish”</li> <li>– Describe the function of the “RN Finish”</li> <li>– Delineate the Pharmacists role in verifying orders finished by “RN Finish”</li> </ul> </li> <li>• Finish and verify pending medication orders using “RN Finish”               <ul style="list-style-type: none"> <li>– Examine the RPMS Menu pathway NURSE -&gt; IOE</li> <li>– Finish Unit Dose and IV orders</li> </ul> </li> <li>• Complete “Two Nurse Verification”               <ul style="list-style-type: none"> <li>– Nurse #1 uses RPMS “RN Finish”</li> <li>– Nurse #2 “verifies” using EHR or RPMS</li> </ul> </li> <li>• Complete a “Hands-on” Exercise               <ul style="list-style-type: none"> <li>– Finish pending medication orders using “RN Finish”</li> <li>– Enter “Verbal” or “Telephone” orders through the EHR and use RN Finish to complete</li> </ul> </li> <li>• Participate in an open discussion               <ul style="list-style-type: none"> <li>– Compare and contrast potential issues and other special situations</li> <li>– Identify potential impact of “RN Finish” on Omnicell and Pyxis</li> </ul> </li> </ul>
<b>2:00 PM</b> to <b>5:00 PM</b>	<b>BCMA RN Finish Key Training (Session 2)</b> See Session 1 Objectives
<b>9:00 PM</b> to <b>12:00 AM</b>	<b>BCMA RN Finish Key Training (Session 3)</b> See Session 1 Objectives

### Wednesday

Time	Topic
<b>10:00 AM</b> to <b>1:00 PM</b>	<b>BCMA RN Finish Key (Session 4)</b> See session 1 Objectives
<b>2:00 PM</b> to <b>5:00 PM</b>	<b>BCMA RN Finish Key (Session 5)</b> See session 1 Objectives

**Thursday**

<b>Time</b>	<b>Topic</b>
<b>10:00 AM to 1:00 PM</b>	<b>BCMA RN Finish Key (Session 6)</b> See session 1 Objectives
<b>9:00 PM to 12:00 AM</b>	<b>BCMA RN Finish Key (Session 7)</b> See session 1 Objectives

## 5.0 Biographical Sketches

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

**EHR Deployment Specialist, IHS Office of Information Technology**

**United South and Eastern Tribes (USET) Regional Extension Center**

Deborah has been Registered Nurse for 32 years. During this time her nursing practice led her to work in a variety of private sector hospitals, clinics, tribal facilities, and for the last 20 years in Indian Health Service. CAPT 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 Office of Information Technology 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 CAPT. 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 Office of Information Technology**

**United South and Eastern Tribes (USET) Regional Extension Center**

CAPT 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 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 Office of Information Technology**

CDR Bradley Bishop is a Commissioned Officer in the United States Public Health Service and has been in the Indian Health Service since 2001. CDR 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. CDR Bishop currently serves

### **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 (ADPAC) in the Pharmacy and Business Office service line acting as the liaison between the service and 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 (EPCS), 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 Networks Corporation (DNC)**

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

Ms. Graves earned her Project Management Certificate from Baldwin Wallace College and a Master's certificate in Project Management from The George Washington University in March 2004. Ms. Graves began her VA career in 1985 at the Dallas VA Medical Center transitioning from Executive Assistant to the Associate Director to Computer Assistant within the Information Resource Management (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 the National Training and Education Office (NT&EO), now known as EES, as the National Education Project Manager for BCMA, Voluntary Service System (VSS), Patient Advocate Tracking System (PATS), Blind Rehabilitation V5.0, Veterans Personal Finance System (VPFS), VistA Blood

Establishment Computer Software (VBECS), 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 with NT&EO, 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.

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

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

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

**Chris Saddler, RN****Information Technology Specialist, IHS Office of Information Technology**

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 Office of Information Technology**

**United South and Eastern Tribes (USET) Regional Extension Center**

LCDR 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 the Office of Information Technology.

**CAPT (ret) David R. Taylor, MHS, RPh, PA-C, RN**

**EHR Training and Deployment Manager, IHS Office of Information Technology**

**United South and Eastern Tribes (USET) Regional Extension Center**

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 Office of Information Technology 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 (MSM) in recognition for his accomplishments in the EHR arena during his Commission.

**Phil Taylor, BA, RN (Contractor)**

**Clinical Applications Specialist, Medsphere Corporation**

Phil is a Clinical Consultant for Medsphere Systems Corporation. Phil has been a Registered Nurse for over 35 years. He holds a degree in Nursing from Vincennes University and a B.A. in Classical Studies from Indiana University. Phil provided clinical application support to VA Medical center staff using the Vista electronic medical record system for over 12 years prior to joining Medsphere. Phil's clinical history was primarily in Psychiatric Nursing. Currently Phil's primary responsibilities are providing training support (such as Basic CAC School and EHR for Inpatient) and configuration/setup support to OpenVista/EHR installations.

**Chris Tucker, RPh**

**Director, Bar Code Resource Office**

**Veterans Health Administration, Office of Informatics and Analytics**

**Health Informatics**

Chris L. Tucker, RPh, is the Director of the BCRO within the Veterans Health Administration Office of Informatics and Analytics (VHA OIA). His office provides strategic direction and oversight for BCMA and other bar code technology applications such as Clinical Laboratory, Anatomic Pathology, and Transfusion Verification. He received his pharmacy degree from Kansas University in 1979 and a Masters Certificate in Project Management from George Washington University's School of Business and Public Management in 2003.

Mr. Tucker has been an Industry Adviser in the Prescription for Change Series, First Do No Harm for the Clinical Initiatives Center of the Advisory Board Company, Washington, DC. He was a member of the Executive Council for the Patient Safety Reporting System administered by the National Aeronautics and Space Administration (NASA) Ames Research Center from 2003 through 2009. Mr. Tucker co-chaired the Product Identification (GTIN) Workgroup for GS-1 US Healthcare from 2008 through 2012 working together with healthcare leaders to adopt and use standards that will help organizations share data, promote accuracy, and work more efficiently to improve patient safety and lower healthcare costs through healthcare track and trace technology standardization.

He has been involved in software development and performance management for medication administration bar coding since 1994, assisting in the development of the BCMA prototype software at the Topeka VA Medical Center. BCMA has received two National Performance Review Awards from then Vic-President Al Gore. Mr. Tucker was a USA Today - RIT Quality Cup Finalist in 2000, and received the Health Information Management Systems Society (HIMSS) Article of the Year Award in

2002. His Office has received a Way Paver Award from the UnSummit in 2006 and a Cheers Award from the Institute of Safe Medication Practices (ISMP) in 2009. Mr. Tucker's has authored the following publications concerning the use of point of care medication administration technology:

- "Using BCMA Software to improve Patient Safety in Veterans Administration Medical Centers." *Journal of Healthcare Information Management*, vol 16, No.1,pg 46-51
- "VA pursues Bar Code Quality." *American Journal of Health-System Pharmacists*, July 2004
- "Using Point of Care to Reduce Medication Errors." *Understanding Health Communications Technologies*, edited by Michigan State University's Institute of Health Care Studies in collaboration with Kansas University Medical School's Health and Technology Outreach. Josey-Bass Publishers, September 2004
- "The VA's Multidisciplinary Approach to Bar Coded Medication Administration Implementation." *Pharmacy Purchasing and Products*, May 2009, vol 6, no.5
- "Quality-monitoring Program for Bar-Code-Assisted Medication Administration." *American Journal of Health System Pharmacy*, June 2009, Vol. 66

**Jan-Erik R. Zeller, RN-BSN, MBA-TM**

**Education Project Manager**

**Employee Education System (EES0)**

**Veterans Health Administration**

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

## Appendix A: RN Finish Key

Notes from Choctaw Nation:

- Nursing staff enter all overnight orders.
  - There would be fewer order entry problems and questions with the use of EHR quick orders as all fields would be defaulted, especially IV orders with the new p11 infusion dialog.
- One nurse enters the order in RPMS: at this point the order is NON-VERIFIED in RPMS and PENDING in EHR.
- An RN then finishes and verifies the order in RPMST This approach provides two nurses reviewing the order.
  - If entered in EHR: One person would enter in EHR while the second would finish in RPMS to provide the two nurse review.
- When order becomes ACTIVE, then it is available in BCMA.
- RN FINISH does not make a med show up in the patient's Omnicell profile; only when pharmacy finishes a med order does it become available in Omnicell.
  - Will still have to override Omnicell to administer overnight orders.
- Order verification by nursing in EHR RPMS: the act of noting the order for accuracy.
  - If nursing has any questions or concerns about the order, call the provider or on-call pharmacist before the order is finished or verified.
  - Order checks are displayed during the RN FINISH process and could possibly prompt nursing to contact the provider or on-call pharmacist.
- During the RN FINISH process, the nurse will have to select a Dispense Drug and number of Units (i.e. Tylenol 650mg = dispense drug Tylenol 325mg tab U/D and number of units is 2).
  - RN may not be completely familiar with what is stocked in Omnicell and will therefore choose the dispense drug and units exactly as ordered, which may not be what is in Omnicell.
  - If what is pulled out of Omnicell does not match the order, then the nurse will have to use the UNABLE TO SCAN option in BCMA to administer the med.
- RN FINISH is only used when a med has to be administered; all other orders are left pending for pharmacy to process in the morning.

## Appendix B: RN Finish User Guide

### B.1 Finish an Order

1. Log on to RPMS from the EHR Resource tab.

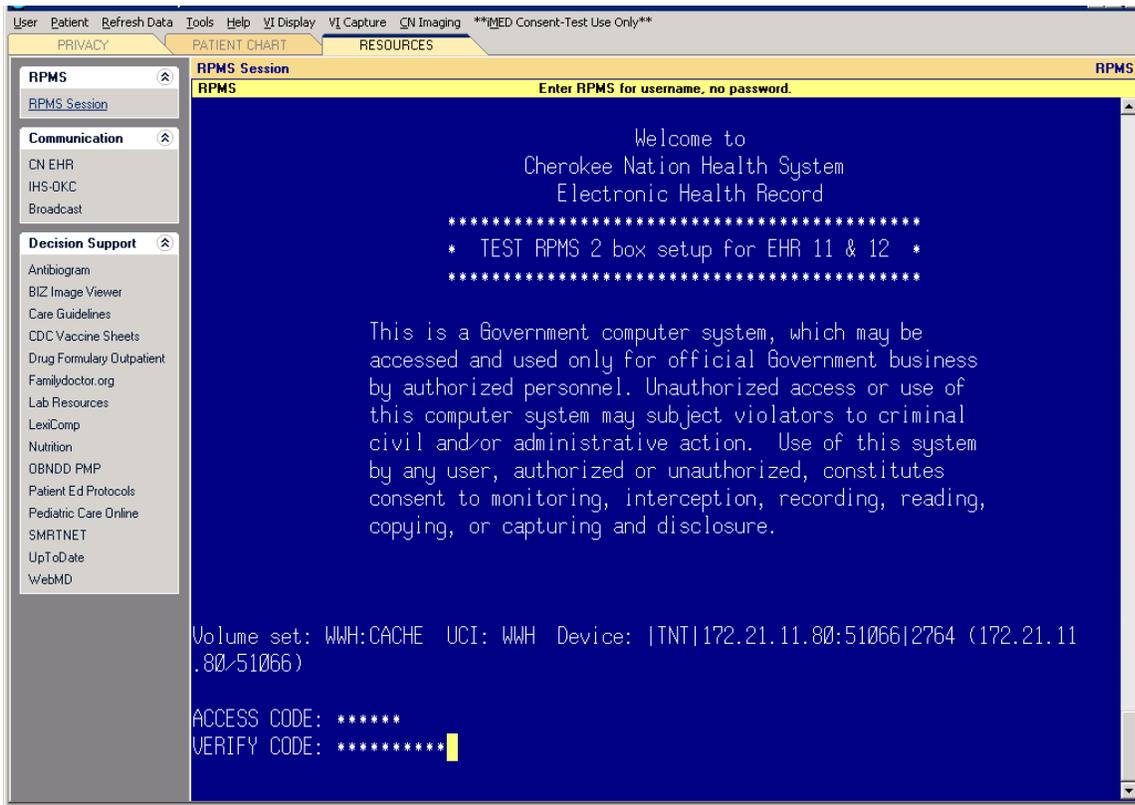


Figure B-1: Log on screen

2. Select NURS Menu. The Nurse Main Menu displays.

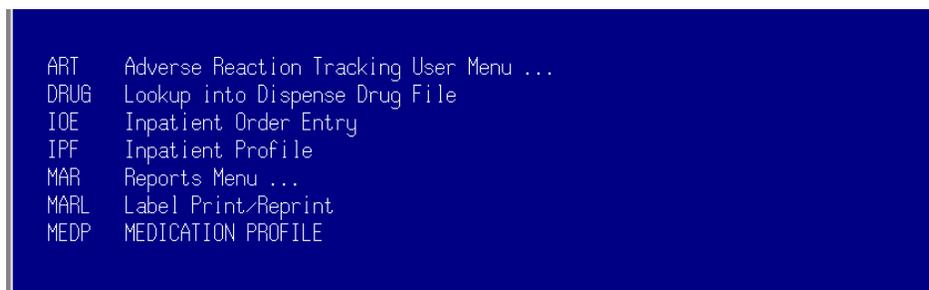


Figure B-2: Nurse Main Menu

```
ART  Adverse Reaction Tracking User Menu ...
DRUG Lookup into Dispense Drug File
IOE  Inpatient Order Entry
IPF  Inpatient Profile
MAR  Reports Menu ...
MARL Label Print/Reprint
MEDP MEDICATION PROFILE

You have 1 PENDING ALERTS
      Enter "VA to jump to VIEW ALERTS option

You've got PRIORITY mail!

Select NURSE MENU Option: IOE
```

Figure B-3: Selecting the **Inpatient Order Entry** option

3. At the “Select NURSE MENU Option” dialog, type **IOE** and press Enter.

```
Select NURSE MENU Option: IOE  Inpatient Order Entry

You are signed on under the TAHLEQUAH IV ROOM

Current IV LABEL device is: IV MIX LABEL PTR
Current IV REPORT device is: IV MIX LASER-132

Select PATIENT: 999111
```

Figure B-4: Selecting the Patient

4. At the “Select PATIENT” prompt, type the patient identifier and press Enter. The Patient Demographics screen displays.

Patient Information		Feb 10, 2014 12:46:26	Page: 1 of 1
DEMO, PATIENT DONALD	Ward: MEDICAL		WAD
HRN: 999111	Room-Bed:	Ht (cm): 170.18	07/19/2013
DOB: 05/10/35 (78)		Wt (kg): 66.68	09/30/2013
Sex: MALE		Admitted: 02/10/14	
Dx: BCMA READY		Last transferred: *****	
Allergies - Verified: ASPIRN ENTERIC COATED, SULFA			
Non-Verified:			
Reactions - Verified: SULFA DRUGS, TDAP, TRIAMTERENE			
Non-Verified:			
Inpatient Narrative:			
Outpatient Narrative: JANE DEMO ONLY OTHER PERSON TO GET MEDS			
Enter ?? for more actions			
PU Patient Record Update		NO New Order Entry	
DA Detailed Allergy/ADR List		IN Intervention Menu	
VP View Profile			
Select Action: View Profile//			

Figure B-5: Patient Demographics screen

- At the “Select Action” prompt, type **View Profile, Short**. The Patient’s Medication Profile displays.

Inpatient Order Entry		Feb 10, 2014 12:47:30	Page: 1 of 2
DEMO, PATIENT DONALD	Ward: MEDICAL		WAD
HRN: 999111	Room-Bed:	Ht (cm): 170.18	07/19/2013
DOB: 05/10/35 (78)		Wt (kg): 66.68	09/30/2013
Sex: MALE		Admitted: 02/10/14	
Dx: BCMA READY		Last transferred: *****	
----- P E N D I N G -----			
1	ATORVASTATIN TAB	? *****	***** P
	Give: 40MG PO DAILY		
2	LEVOTHYROXINE TAB	? *****	***** P
	Give: ONE AND ONE-HALF TABLETS PO EVERY MORNING		
3	ALBUTEROL INHL, ORAL	? *****	***** P
	Give: 2 PUFFS 90MCG/ACTUAT INHL PO Q4H PRN		
4	DOCUSATE CAP, ORAL	? *****	***** P WS
	Give: 200MG PO BID PRN		
5	cefTRIAZONE INJ, SOLN	? *****	***** P
	Give: IVPB DAILY		
6	in DEXTROSE 5% IN 1/2 NS 1000 ML 100 ml/h?	*****	***** P
+ Enter ?? for more actions			
PI Patient Information		SO Select Order	
PU Patient Record Update		NO New Order Entry	
Select Action: Next Screen//			

Figure B-6: Patient Medication Profile screen

- Find the target order using the **Next Screen** option as necessary.

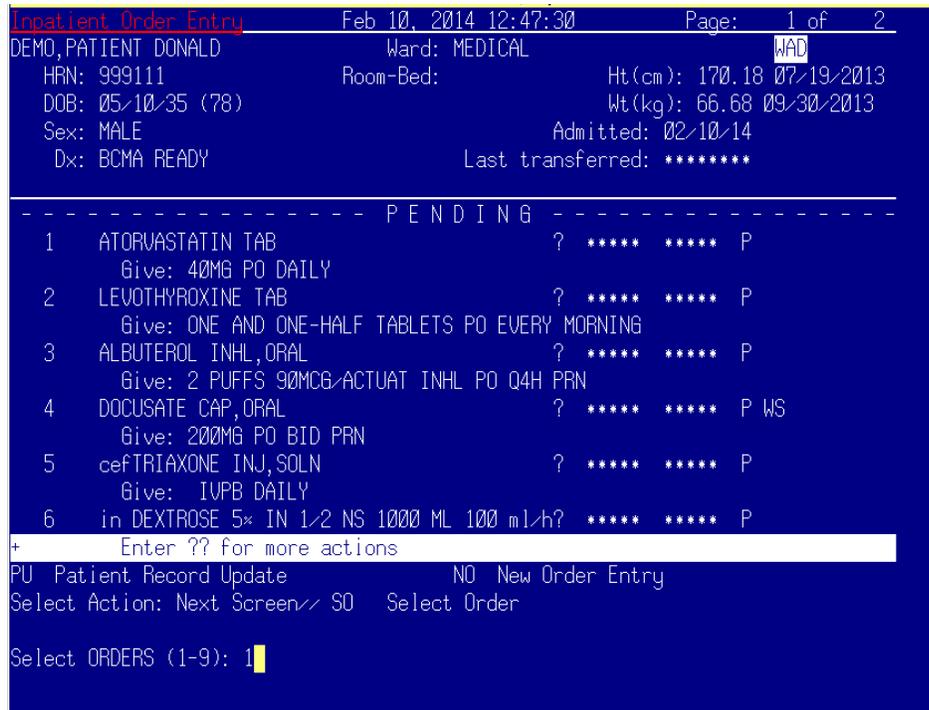


Figure B-7: Selecting an Order

7. At the “Select Action” prompt, type **SO** (Select Order) and press Enter.
8. At the “Select ORDERS” prompt, type the order number for medication to process. Medication Details will populate.

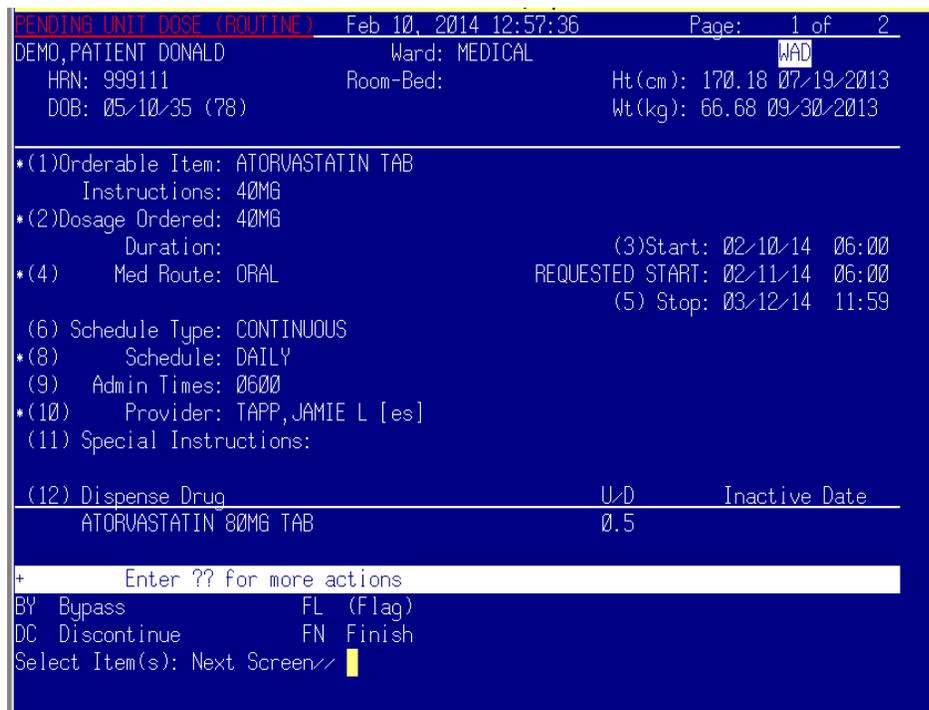


Figure B-8: Medication Details screen

9. Review the Medication Order Details for completeness and accuracy of the Five Rights:
  - Use the up and down arrow keys to move through the details of the order.
  - Use the minus (-) and plus (+) keys to move back and forth through the pages.
10. At the “Select Item(s)” prompt, type **FN** (Finish) and press Enter. The order details to include the dispense drug displays. Review this information for accuracy.

```

NON-VERIFIED UNIT DOSE      Feb 10, 2014 13:01:06      Page: 1 of 2
DEMO, PATIENT DONALD      Ward: MEDICAL      WAD
HRN: 999111      Room-Bed:      Ht(cm): 170.18 07/19/2013
DOB: 05/10/35 (78)      Wt(kg): 66.68 09/30/2013
-----
*(1)Orderable Item: ATORVASTATIN TAB
      Instructions: 40MG
*(2)Dosage Ordered: 40MG
      Duration:      (3)Start: 02/10/14 06:00
*(4)  Med Route: ORAL      REQUESTED START: 02/11/14 06:00
      (5) Stop: 03/12/14 11:59
      (6) Schedule Type: CONTINUOUS
*(8)  Schedule: DAILY
      (9) Admin Times: 0600
*(10)  Provider: TAPP, JAMIE L [es]
      (11) Special Instructions:
-----
(12) Dispense Drug      U/D      Inactive Date
      ATORVASTATIN 80MG TAB      0.5
-----
+      Enter ?? for more actions
ED Edit      AC ACCEPT
Select Item(s): Next Screen// AC

```

Figure B-9: Order Details page

11. At the “Select Item(s)” prompt, type **AC** (Accept) and press Enter.

## B.2 Edit a Finished and Accepted Order

```

NON-VERIFIED UNIT DOSE      Feb 10, 2014 14:57:09      Page: 1 of 2
DEMO,PATIENT DONALD        Ward: MEDICAL          WAD
HRN: 999111                Room-Bed:              Ht(cm): 170.18 07/19/2013
DOB: 05/10/35 (78)         Wt(kg): 66.68 09/30/2013

* (2) Dosage Ordered: 40MG
      Duration:              (3) Start: 02/10/14 06:00
* (4) Med Route: ORAL      REQUESTED START: 02/11/14 06:00
                          (5) Stop: 03/12/14 11:59
(6) Schedule Type: CONTINUOUS
* (8) Schedule: DAILY
(9) Admin Times: 0600
* (10) Provider: TAPP,JAMIE L [w]
(11) Special Instructions:

(12) Dispense Drug          U/D          Inactive Date
-----
      ATORVASTATIN 80MG TAB      0.5

+ Enter ?? for more actions
DC Discontinue      ED Edit          AL Activity Logs
HD (Hold)           RN (Renew)
FL Flag            VF Verify
Select Item(s): Next Screen // ED Edit

Select FIELDS TO EDIT: █

```

Figure B-10: Selecting the field to edit

1. At the “Select Item(s)” prompt, type **ED** and press Enter.
2. At the “Select FIELDS TO EDIT” prompt, type the number corresponding to the field to be edited and press Enter (in the example, the medication dispense drug is incorrect; select field 12).

```

Select DISPENSE DRUG: ATORVASTATIN 80MG TAB // ATORVASTATIN 80MG TAB      CV
350      -652151          63304-0830-05
      ...OK? Yes // N (No)
ATORVAST
1  ATORVASTATIN 10MG TAB U/D          CV350          60429-0323-90
2  ATORVASTATIN 20MG TAB U/D          CV350          60429-0324-90
3  ATORVASTATIN 80MG TAB U/D          CV350          00071-0158-92
CHOOSE 1-3: 2  ATORVASTATIN 20MG TAB U/D          CV350          60429-0324-
90
Are you adding 'ATORVASTATIN 20MG TAB U/D' as
a new DISPENSE DRUG? No // Y (Yes)
UNITS PER DOSE: 2
Select DISPENSE DRUG: █

```

Figure B-11: Adding a new drug

3. At the “CHOOSE  $x$ - $y$ ” prompt, type the number of the drug (from the list) and press Enter. The list shows what is available in Omnicell to include dispense drug and units per dose.

4. At the “Are you adding...new DISPENSE DRUG” prompt, type **Y** and press Enter.
5. Return to the Edit screen (Figure B-10).

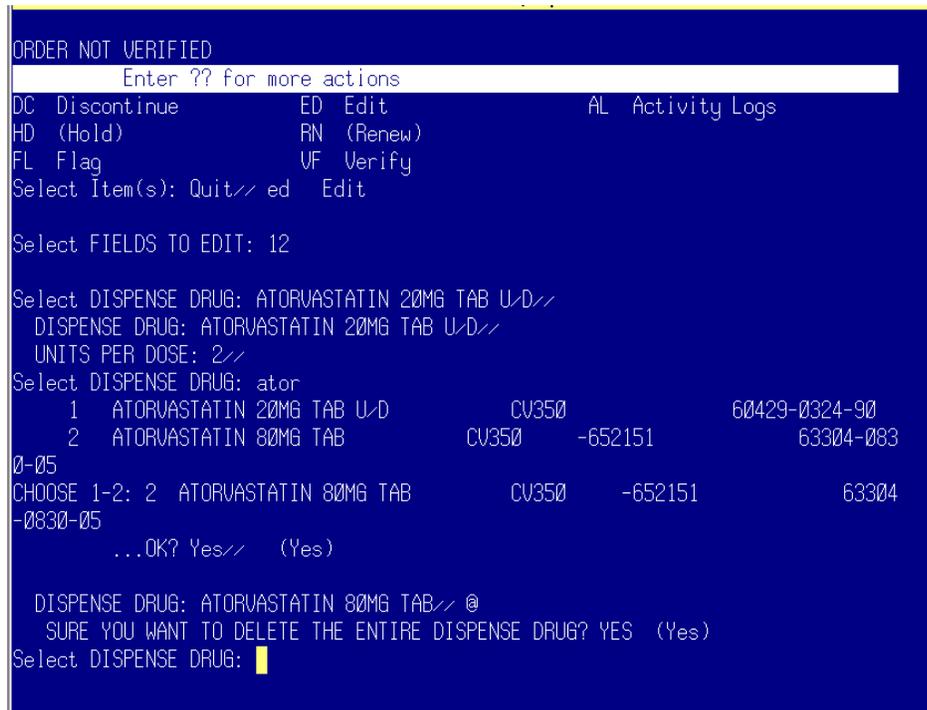


Figure B-12: Selecting the drug to dispense

6. At the “Select FIELDS TO EDIT” prompt, type the number corresponding to the field to be edited and press Enter (in the example, field 12 is selected).
7. At the “Select DISPENSE DRUG” prompt, type the first few characters of the dispense drug name and press Enter. A list of potential matches displays.
8. Locate the incorrect drug on the list. At the “CHOOSE *x-y*” prompt, type the number corresponding to the incorrect drug and press Enter.
9. At the “...OK?” confirmation prompt, press Enter to accept the default.
10. At the “DISPENSE DRUG...” prompt, type @ and press Enter.
11. At the confirmation prompt, press Enter to accept the default. The correct dispense drug is listed. The order can now be appropriately verified by a second RN in EHR.

## B.3 Continue Processing Medications

Figure B-13 is an example of RN Finish for IV Medications. Medication Details will populate. Review the Medication Order Details for completeness and accuracy of the Five Rights:

- Use the up and down arrow keys to move through the details of the order.
- Use the minus (-) and plus (+) keys to move back and forth through the pages.

```

Inpatient Order Entry      Feb 10, 2014 13:19:14      Page: 1 of 2
DEMO,PATIENT DONALD      Ward: MEDICAL             WAD
HRN: 999111              Room-Bed:                 Ht(cm): 170.18 07/19/2013
DOB: 05/10/35 (78)      Wt(kg): 66.68 09/30/2013
Sex: MALE                Admitted: 02/10/14
Dx: BCMA READY          Last transferred: *****

-----NON-VERIFIED-----
1  ATORVASTATIN TAB      C 02/10 03/12 N
   Give: 40MG PO DAILY

-----PENDING-----
2  LEVOTHYROXINE TAB    ? ***** P
   Give: ONE AND ONE-HALF TABLETS PO EVERY MORNING
3  ALBUTEROL INHL,ORAL ? ***** P
   Give: 2 PUFFS 90MCG/ACTUAT INHL PO Q4H PRN
4  DOCUSATE CAP,ORAL  ? ***** P WS
   Give: 200MG PO BID PRN
5  cefTRIAZONE INJ,SOLN ? ***** P
   Give: IVPB DAILY

+ Enter ?? for more actions
PU Patient Record Update      NO New Order Entry
Select Action: Next Screen// SO Select Order

Select ORDERS (1-9): 5

```

Figure B-13: Selecting an Order

1. At the “Select Action” prompt, type **SO** (Select Order) and press Enter.
2. At the “Select ORDERS” prompt, type the number of the medication to process and press Enter. The Edit screen (Figure B-14) displays.

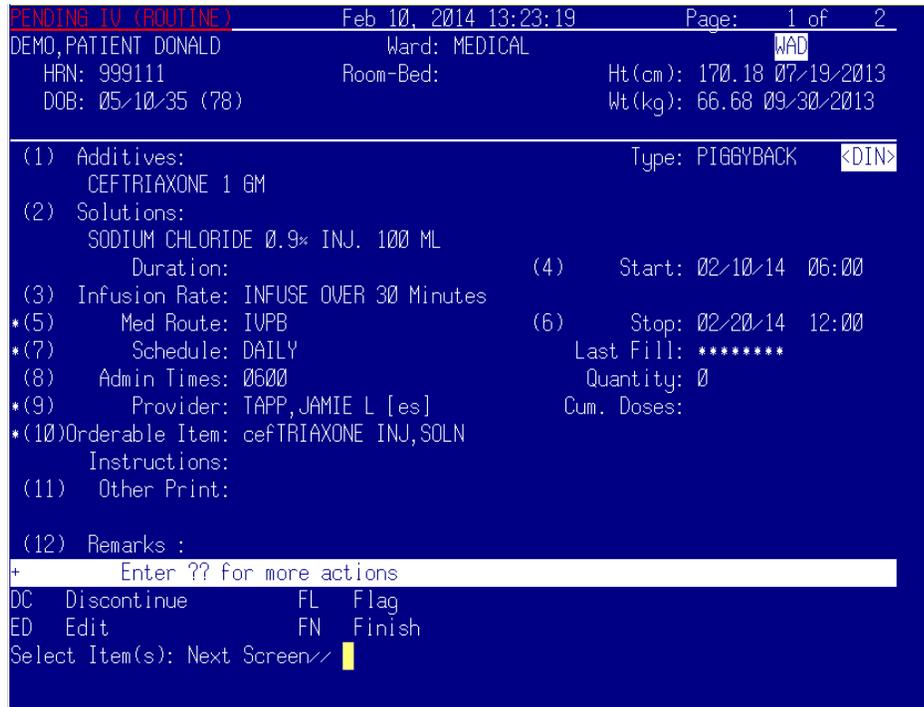


Figure B-14: Edit screen

- At the “Select Item(s)” prompt, type **FN** (Finish) and press Enter. The IV TYPE will auto-populate. Any order checks will display.

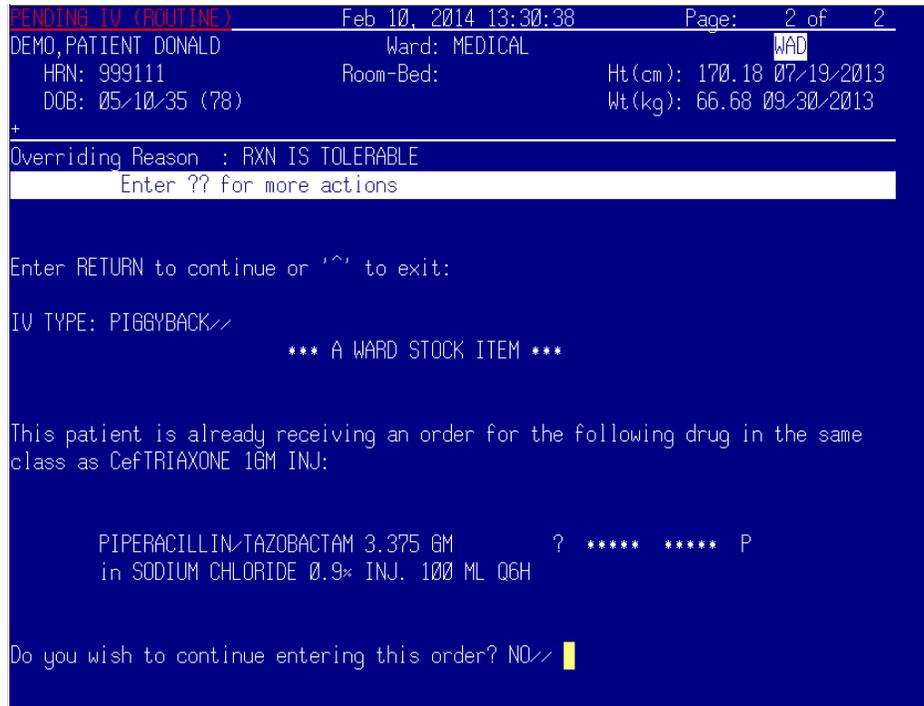


Figure B-15: Order details screen

4. At the “Do you wish to continue entering this order?” prompt do one of the following:
  - Press Enter to accept the default (**NO**) and exit the order.
  - Type **YES** and press Enter to continue processing the order.
5. Review the displayed information for accuracy, then type **AC** (Accept) and press Enter. Information about the order will reappear to include administration times, start time, stop time and expected first dose time.

```
Orderable Item: cefTRIAxONE INJ,SOLN
Give: IVPB DAILY

145668
999111 MEDICALSURGICAL 02/10/14
DEMO,PATIENT DONALD NF

CEFTRIAxONE 1 GM
SODIUM CHLORIDE 0.9% INJ. 100 ML

Dose due at: _____
INFUSE OVER 30 Minutes
DAILY
0600
Beyond Use Date: _____
1[1]

Start date: FEB 10,2014 06:00 Stop date: FEB 20,2014 12:00

Expected First Dose: FEB 10,2014@06:00

Is this O.K.? YES// █
```

Figure B-16: Order Details page

6. If the information is correct, at the “Is this O.K.” prompt, do one of the following:
  - Type **YES** and press Enter to accept the order.
  - Type **NO** and press Enter to exit the order.

This successfully RN Finished an IV medication. A second RN must verify the order in EHR.
7. Type **Q** (Quit) to return to Medication Profile.
8. Type **SO** (Select Order) and press Enter.
9. Type the order number for the medication to process and press Enter. Review the Medication Order Details for completeness and accuracy of the five Rights:
  - Use the up and down arrow keys to move through the details of the order.
  - Use the minus (-) and plus (+) keys to move back and forth through the pages.

```

PENDING UNIT DOSE (ROUTINE) Feb 10, 2014 15:17:08 Page: 1 of 2
DEMO,PATIENT DONALD Ward: MEDICAL WAD
HRN: 999111 Room-Bed: Ht(cm): 170.18 07/19/2013
DOB: 05/10/35 (78) Wt(kg): 66.68 09/30/2013

* (1) Orderable Item: LEVOTHYROXINE TAB
      Instructions: ONE AND ONE-HALF TABLETS
* (2) Dosage Ordered: ONE AND ONE-HALF TABLETS
      Duration: (3) Start: 02/10/14 06:00
* (4) Med Route: ORAL REQUESTED START: 02/11/14 06:00
      (5) Stop: 03/12/14 11:59

(6) Schedule Type: CONTINUOUS
* (8) Schedule: EVERY MORNING
(9) Admin Times: 0600
* (10) Provider: TAPP,JAMIE L [es]
(11) Special Instructions:

(12) Dispense Drug U/D Inactive Date

(7) Self Med: NO
+ INVALID DISPENSE DRUG
BY Bypass FL (Flag)
DC Discontinue FN Finish
Select Item(s): Next Screen //

```

Figure B-17: Order with **INVALID DISPENSE DRUG** flag

- Is there something incorrect about this order?
- How are you going to handle this situation?