



RESOURCE AND PATIENT MANAGEMENT SYSTEM

**EHR Clinical Informatics Series
Inpatient Medications for Outpatient (IMO)**

Clinic BCMA & Outpatient ADC Profiling

Deployment & Training Agenda

Tuesdays

Jan 23rd, Jan 30th, Feb 6th, Feb 13th, Mar 6th

2024

Indian Health Service Office of Information Technology (OIT)
Pharmacy Professional Specialty Group (PSG) Committee
National Council of Informatics
Area Clinical Informaticists

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1.0 Course Information

1.1 Description

The course will provide an overview of the Inpatient Medications for Outpatient (IMO) functionality in RPMS as it applies to Emergency Department and other Outpatient Clinic settings, including deployment prerequisites, drug file and medication quick order optimization, provider and pharmacist roles, and RPMS configuration for IMO.

1.2 Purpose

The purpose of this training is to prepare sites for utilization and deployment of Inpatient Medications for Outpatient (IMO) in Emergency Department and other Outpatient Clinic settings in preparation for the new Clinic BCMA and Outpatient Automated Dispensing Cabinet (ADC) profiling.

1.3 ISMP “New Best Practices” - Clinic BCMA & BOP ADC Profiling

In February 2022 the Institute of Safe Medication Practices (ISMP) released its “New Best Practices in 2022-2023 – Targeted Medication Safety Best Practices for Hospitals.”

New *Best Practice* 18: Maximize the use of barcode verification prior to medication and vaccine administration by expanding use beyond inpatient care areas.

1. Specifically target clinical areas with an increased likelihood of a short or limited patient stay (e.g. emergency department, perioperative areas, infusion clinics, dialysis centers, radiology, labor and delivery areas, catheterization laboratory, outpatient areas).
2. Regularly review compliance and other metric data to assess utilization and effectiveness of this safety technology (e.g. scanning compliance rates, bypassed or acknowledged alerts).

New *Best Practice* 19: Layer numerous strategies throughout the medication-use process to improve safety with high-alert medications.

1. For each medication on the facility’s high-alert medication list, outline a robust set of processes for managing risk, impacting as many steps of the medication-use process as feasible.
2. Ensure that the strategies address system vulnerabilities in each stage of the medication-use process (i.e., prescribing, dispensing, administering, and monitoring) and apply to prescribers, pharmacists, nurses, and other practitioners involved in the medication-use process.

3. Avoid reliance on low-leverage risk-reduction strategies (e.g., applying high-alert medication labels on pharmacy storage bins, providing education) to prevent errors, and instead bundle these with mid- and high-leverage strategies.
4. Limit the use of independent double checks to select high-alert medications with the greatest risk for error within the organization (e.g., chemotherapy, opioid infusions, intravenous [IV] insulin, heparin infusions).
5. Regularly assess for risk in the systems and practices used to support the safe use of medications by using information from internal and external sources (e.g., The Joint Commission, ISMP).
6. Establish outcome and process measures to monitor safety and routinely collect data to determine the effectiveness of risk-reduction strategies.

Below is a summary of the BOP and BCMA functionality that will be updated with soon-to-be-released RPMS patches.

1.3.1 Automated Dispensing Cabinet (ADC) Outpatient Profiling

BPO ADC Outpatient Profiling expands functionality to send Inpatient Medications for Outpatient (IMO) orders via BOP Interface to Automated Dispensing Cabinets (ADCs) in the same manner as medications are transmitted for admitted patients.

- BOP Outpatient Profiling functionality is being added to improve medication safety
- BOP Outpatient Profiling will allow for the profiling of patient specific medication orders to ADCs in outpatient clinic areas such as the Emergency Department, Urgent Care, Labor & Delivery Triage, Infusion, & Same Day Surgery.

1.3.2 Clinic BCMA (Bar Code Medication Administration)

Clinic BCMA will expand functionality of the Bar Code Medication Administration (BCMA) from its hardcoded limitation of patients with admitted or observation status (i.e. Inpatient) to include ambulatory status (i.e. Outpatient)

- Clinic BCMA functionality is being added to improve patient medication safety and to enhance medication administration documentation.
- Clinic BCMA functionality will allow for the utilization of BCMA in ambulatory clinic areas such as Emergency Department, Urgent Care Labor & Delivery Triage, Infusion, and Same-Day Surgery

1.3.3 APSP IHS Pharmacy Modifications Version 7.0 Patch 1033 - Release

APSP IHS Pharmacy Modifications Version 7.0 Patch 1033 was released 7/27/2023. This patch includes a number of enhancements specific to Bar Code Medication Administration (BCMA), Inpatient Pharmacy, and Inpatient Medications for Outpatient (IMO) functionality.

APSP v7.0 p1033 introduces Clinic BCMA by expanding the functionality of BCMA from its previous hardcoded limitation of patients with admitted or observation status (i.e. inpatients) to include ambulatory status (i.e. outpatients). A full summary of the patch contents can be found below.

Users should refer to the APSP v7.0 p1033 Supplemental User Guide <https://www.ihs.gov/rpms/package/docs/APSP/apsp0700.33o.pdf> for patch specific instructions.

Thank you to Claremore Indian Hospital, Crow Northern Cheyenne Hospital, Phoenix Indian Medical Center, and Quentin N. Burdick Memorial Health Care Facility for serving as test sites for this patch.

Please let me know if you have questions. Thank you.

Latona

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1.3.4 Requirements for I/T/U Sites to Utilize New Functionality

- Utilization of Inpatient Medications for Outpatient (IMO) for Clinic Med Orders
- Profiling Automated Dispensing Cabinets
- Medication Orders will need to be finished by a pharmacist to be available for profiling and scanning

1.4 Targeted Audience

Inpatient Medications for Outpatient (IMO) Training is targeted at Clinical Informaticists, Pharmacists, and other healthcare and information technology professionals involved in RPMS EHR configuration, RPMS drug file management, EHR medication quick order management, and training of pharmacists and prescribers.

This informatics training will not have classrooms in conjunction with the eLearning/Hands-on course.

1.5 Prerequisites

Each participant must have access to a computer with internet connection and a separate telephone line to dial into the Adobe Connect Web Conference number. Participants are strongly encouraged to connect using a computer that has two monitors attached.

1.6 Continuing Education Information

No Continuing Education Credit is available.

1.7 Guidelines for Receiving Certificate of Attendance

Certificates of attendance will be awarded upon completion to those who have both registered for this activity AND "signed-in" to the Adobe Connect Session Attendance Pod with Last Name, First Name, Credentials, and Location.

1.8 Course Materials

Will be available during the Adobe Session for download

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2.0 Learning Objectives

At the end of this course, participants should be able understand Inpatient Medications for Outpatient (IMO) functionality in RPMS as it applies to Emergency Department and other Outpatient Clinic settings, including deployment prerequisites, drug file and medication quick order optimization, provider and pharmacist roles, and RPMS configuration for IMO.

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3.0 Instructors and Facilitators

3.1 IHS Headquarters - Office of Information Technology (OIT)

- CAPT (ret) David Taylor, MHS, RPh, PA-C, RN – RPMS EHR Deployment & Training
- CAPT Latona M. Austin, PharmD, BCPS, Pharmacy Consultant

3.2 Phoenix Area

- CDR Kendall Van Tyle, PharmD, BCPS, Pharmacy Consultant

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4.0 Detailed Agenda – All Times Are Mountain Time

Section	Title
<p>Session One January 23, 2024 10:00 – 3:00 PM</p>	<p>Clinic BCMA and ADC Outpatient Profiling Kick-off Instructor(s): David Taylor, Lisa Tihista, Chris Saddler, Latona Austin, Kendall Van Tyle</p> <ul style="list-style-type: none"> • Introductions and sign-in assistance • Training overview including learning objectives, agenda, and training materials • EHR Modernization Update • OIT Newsletter December 2022 “What Can We Do Now” • Clinic BCMA & ADC Outpatient Profiling Deployment Readiness <ul style="list-style-type: none"> ✓ ED Pharmacist Practices ✓ Clinic BCMA ✓ ADC Outpatient Profiling ✓ Equipment Needs
<p>Session Two January 30, 2024 10:00 – 3:00 PM</p>	<p>Inpatient Medications for Outpatient (IMO) Instructor(s): Latona Austin, Kendall Van Tyle</p> <ul style="list-style-type: none"> • Introductions and sign-in assistance • Training overview including learning objectives, agenda, and training materials • Identify participant needs and expectations • Inpatient Medications for Outpatient (IMO) overview <ul style="list-style-type: none"> ✓ What is IMO? ✓ Is IMO right for my site? ✓ Who is involved in IMO deployment, • IMO deployment prerequisites <ul style="list-style-type: none"> ✓ Inpatient drug file entries ✓ EHR medication quick orders and menus ✓ Staff training: pharmacists and prescribers • Homework assignment: <ul style="list-style-type: none"> ✓ Generate report from Automated Dispensing Cabinet (ADC aka Pyxis/Omniceil) of medications stocked in ED/Outpatient Clinics where IMO will be deployed
<p>Session Three Feb 6th, 2024 10:00 - 3:00 PM</p>	<p>RPMS Drug File and EHR Medication Quick Orders Configuration Instructor(s): Latona Austin, Kendall Van Tyle</p> <ul style="list-style-type: none"> • RPMS Drug File configuration • EHR Medication Quick Order and Menu Configuration

Session Four Feb 13th, 2024 10:00 – 3:00 PM	IMO Order Entry in EHR and Pharmacist Processing in RPMS Instructor(s): Latona Austin, Kendall Van Tyle <ul style="list-style-type: none">• Provider order entry of IMO orders in EHR• Pharmacist processing of IMO orders in RPMS• Configuring Inpatient Order Queue RPMS session
Session Four Mar 6th, 2024 10:00 – 3:00 PM	RPMS IMO Site Configuration and Wrap-Up Instructor(s): Latona Austin, Kendall Van Tyle <ul style="list-style-type: none">• This session requires a user with VA Fileman access for configuration• IMO Clinic Setup• IMO Clinic Definition• Display Group• End-to-End Testing• Deployment Schedule

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5.0 Appendix (EHR Patch 11 Guide)

5.1 Clinic Set Up

Each clinic location needs to be defined as a site for IMO. Set up this field in FileMan.

```
Select OPTION: 1 ENTER OR EDIT FILE ENTRIES
Select HOSPITAL LOCATION NAME: EMERGENCY ROOM
ADMINISTER INPATIENT MEDS?: YES//
```

5.2 Clinic Definition

The clinic definition file 53.46 must be populated with the clinic name, as well as if IMO orders should be AUTO-DC'd and/or sent to BCMA. This does not override other auto-d/c settings.

```
INPUT TO WHAT FILE: PHARMACY SYSTEM// 53.46 CLINIC DEFINITION
                                     (1 entry)
EDIT WHICH FIELD: ALL//

Select CLINIC DEFINITION: EMERGENCY ROOM
CLINIC: EMERGENCY ROOM//
NUMBER OF DAYS UNTIL STOP:
AUTO-DC IMO ORDERS: YES
SEND TO BCMA?:
```

5.3 Display Group

A new CLINIC ORDERS display group in IMO (Inpatient Medication orders for Outpatients) has been created for grouping IMO orders. On the Orders tab, IMO orders will be displayed under the Clinic Orders group. This includes oral medications, injections and nursing orders. Infusions will display as "Infusions." Users can select Custom Views | Clinic Orders or Custom Views | Pharmacy | Clinic Orders to view all IMO orders. On the Meds tab, IMO orders are displayed under Inpatient Medications. Transfer actions from the Meds tab are not allowed for IMO orders.

For EHR to display the Clinic Orders display group on the Orders tab, sites must make an entry in the ORWOR CATEGORY SEQUENCE parameter at the package or system level depending on which level the site uses.

```
Enter selection: 8 System

Setting ORWOR CATEGORY SEQUENCE for Package: ORDER ENTRY/RESULTS
REPORTING
Select Sequence: ?

Sequence Value
-----
10 M.A.S.
30 VITALS/MEASUREMENTS
35 ACTIVITY
40 NURSING
50 DIETETICS
60 IV MEDICATIONS
65 OUTPATIENT MEDICATIONS
69 CLINIC ORDERS
70 INPATIENT MEDICATIONS
72 NON-VA MEDICATIONS
75 LABORATORY
80 IMAGING
90 CONSULTS
100 PROCEDURES
110 SURGERY
120 OTHER HOSPITAL SERVICES

Select Sequence: 71
Are you adding 71 as a new Sequence? Yes// YES
Sequence: 71// 71
Display Group: CLINIC ORDERS
```

When selecting inpatient med orders, the same list that you see for inpatients should be selectable, including all tablets. Sites may also choose to create a specific order menu for Clinic Orders, which may include medications, nursing/patient care orders, etc.

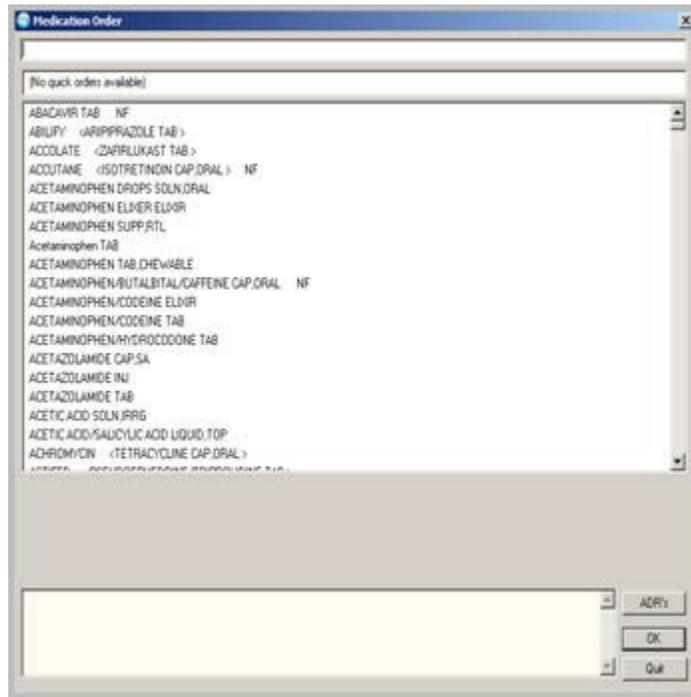


Figure 7-1: IMO Selection in Clinic

IMO medications appear in the list as **Clinic Orders**.

The screenshot shows a table of orders with columns for Service, Order, Duration, Provider, Nurse, Clerk, Chart, and Status. A red arrow points to the first row, which is a "Clinic Order" for "ACETAMINOPHEN W/CODEINE 30MG TAB UD Two (2) TABLETS PO STAT".

View Orders	Service	Order	Duration	Provider	Nurse	Clerk	Chart	Status
Active Orders include:	Clinic Order	ACETAMINOPHEN W/CODEINE 30MG TAB UD Two (2) TABLETS PO STAT	Start: 08/07/12 15:12 Stop: 08/11/12 15:12	User,D				active
Write Orders	Consult	PHYSICAL THERAPY Cons Consultant's Choice	Start: 05/10/06 18:44	Hagen,M				active
Delayed Orders	Consult	DIABETES Cons Consultant's Choice	Start: 04/12/12 20:15 Stop: 08/07/12 08:51	User,D				complete
Laboratory	Consult	DIABETES Cons Consultant's Choice	Start: 04/22/09 15:32	User,D				pending
Imaging	Consult	TOBACCO CESSATION Cons Consultant's Choice	Start: 10/21/08 16:07	User,D				pending
Outpatient Medications	Imaging	MAMMOGRAM BIAT	Start: 04/10/12	User,D				pending
Inpatient Medications	Imaging	HP ? OR MORE VIEWS	Start: 03/25/10	User,D				pending

Figure 7-2: Processed IMO Order

6.0 Biographical Sketches

CAPT Latona Austin, PharmD, BCPS

Pharmacy Informatics Consultant

IHS Office of Information Technology

CAPT Latona Austin began her career with the Indian Health Service in 2003. She worked for 15 years as a clinical pharmacist at Pine Ridge IHS Hospital where she collaterally managed pharmacy informatics for the Pine Ridge IHS Service Unit. She has been the Pharmacy Lead for implementation of EHR for Emergency Department, Inpatient EHR, Telepharmacy, MultiDivision Drug File, Inpatient Medications for Outpatient, Barcode Medication Administration, Alaris Carefusion Smartpump Drug Library, and conversion from Omnicell to Pyxis ES automated dispensing cabinets at Pine Ridge IHS Hospital. She served as the Director of Pharmacy for the Pine Ridge Service Unit for two years where she has managed the implementation of a Pharmacy Hepatitis C Clinic, Antimicrobial Stewardship Program, and Overnight Inpatient/Emergency Medicine Pharmacy Services. CAPT Austin has recently joined the Health Information Technology Team with the IHS Office of Technology where she will serve as the Federal Lead for BCMA, Outpatient Pharmacy, and Inpatient Pharmacy packages.

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

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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 45 years of public health, clinical, and clinical-administrative experience in the IHS as both a Commissioned Officer and Federal Employee. CAPT (ret) 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. Mr. Taylor joined the Health IT Modernization & Innovation Office in May 2022 and has been charged with both training and deployment 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.

CAPT Kendall Van Tyle, PharmD, BCPS
Pharmacy Informatics Consultant
Phoenix Area Indian Health Service

CAPT Van Tyle is a Commissioned Officer in the United States Public Health Service. He earned a BS in Microbiology and worked as a clinical microbiologist for 10 years before graduating with a Doctor of Pharmacy degree from the University of Arizona in 2006. CDR Van Tyle completed a PGY1 Pharmacy Residency with the Indian Health Service in 2007 at Northern Navajo Medical Center (NNMC) in Shiprock, New Mexico where he continued to work as a board certified clinical pharmacist, pharmacist clinician, and informaticist until 2016. While serving in the Navajo Area, he was part of the BCMA deployment team and served as one of the Navajo Area pharmacy technical consultants. CDR Van Tyle initiated the Antibiotic Stewardship Program at NNMC and continues to work in that interest area with the IHS National workgroup. CDR Van Tyle is currently employed at the Phoenix Area Office, Office of Health Promotions where he serves as the Phoenix Area Pharmacy Informatics Consultant.

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7.0 At the RPMS Training Course Materials Library

Course materials may be downloaded from the RPMS Training FTP site at: [Course Materials | Training \(ihs.gov\)](#) after the American with Disabilities Act (ADA) 508 remediation.

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