Preparing for the Department of Defense’s New Electronic Health Record: MHS GENESIS

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CPE Information

• Target Audience: Pharmacists & Technicians
• ACPE#: 0202-0000-16-177-L04-P/T
• Activity Type: Knowledge-based

Learning Objectives

• Identify key aspects of the future DoD Healthcare Management System Modernization electronic health record.
• Describe elements of Barcode Medication Administration (BCMA) and how it will positively impact patient care.
• State the challenges of migrating to MHS GENESIS Inventory Management and how sites must prepare for this major transition in pharmacy operations.
• Explain key features of both inpatient and outpatient PharmNET and significant changes that will take place as DoD migrates from CHCS/Essentris to PharmNET operations.

Self-Assessment Questions

• Pharmacies will continue to use CHCS to process legacy system prescription refills for how long after MHS GENESIS go-live?
  A. 30 days
  B. 90 days
  C. 180 days
  D. Up to 1 year
  E. Legacy systems will not be used after go-live

• MHS GENESIS features such as power plans and order dosing sentences will support the MHS journey towards High Reliability through deployment of Enterprise wide, evidence based standard treatment approaches.
  True/False

• All pharmacy locations will have a complete perpetual inventory solution immediately after MHS GENESIS go-live.
  True/False

CPE Information and Disclosures

Jason Christianson, David Hardy, Traci Hindman, and Kyle Nebelsick "declare no conflicts of interest, real or apparent, and no financial interests in any company, product, or service mentioned in this program, including grants, employment, gifts, stock holdings, and honoraria."

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Introduction

- Defense Healthcare Management System Modernization (DHMSM) program overview
  - Oversees deployment of MHS GENESIS
    - Communication, testing, logistics, business operations, change management
- Leidos Partnership for Defense Health (LPDH)
  - Leidos
  - Cerner
  - Henry Schein
  - Accenture
  - 30+ smaller contractors

Why Modernize?

Why Modernize?

Single DoD Electronic Health Record

Garrison

Operational

Benefits
- Incorporate dental capability
- Replace legacy operational components
- Two-way communication
- Train like we fight

DoD EHR Strategy

EHR Objectives

Objective 1: Interoperability
- Initial build of DoD Data Exchange
- Increased interoperability access

Objective 2: Modernization
- Published Request for Proposal
- Selected vendors

FUTURE

PAST

CURRENT

Align legacy clinical system interfaces to DoD Data Exchange
Reduce infrastructure redundancy and increase reliability
Provide full access to interoperability systems
Upgrade infrastructure as part of EHR modernization
Deploy DoD EHR to garrison and operational sites

Functional Community Structure & High Level Roles

The model depicted below outlines the functional community decision making and governance structure with the high level roles for each level within the structure.

Role
- Functional Community: leadership, strategy, single voice of the customer
- Functional Advisory Board (FAB): strategic and functional leadership
- Functional Governance Group (FGG): single voice of the customer, functional representation
- Functional Mission Support (FMS): end-to-end functional representation
- Functional Business Process Management (FBPM): identifies and communicates changes to the functional community

Functional Community Structure & Detailed Roles

Functional Community

FGG

FAB

FMSS

FBPM

Functional Mission Support (FMS)

Functional Business Process Management (FBPM)

Functional Advisory Board (FAB)

Functional Community (FC)

MHS Functional Governance Groups

- Pharmacy Advisory Council (PAC)
- Pharmacy Task Force (PTF)
- Pharmacy Task Group (PTG)
- Pharmacy Information Technology Advisory Committee (PITAC)
- Pharmacy Task Force (PTF)
- Pharmacy Information Technology Advisory Committee (PITAC)
**PEO DHMS Alignment**

- Department of Veterans Affairs
- Secretary of Defense
- USD for Acquisition, Technology, and Logistics
- USD for Personnel and Readiness
- ASD, Health Affairs

**DoD/VA Interagency Program Office (IPO)**

- Standards
- DoD Healthcare Management System Modernization (DHMSM®)
- Modernized EHR Acquisition

**Defense Health Agency (DHA)**

- Office of Information Technology
- Joint Operational Medicine Information Systems (JOMIS)

**Program Executive Office Defense Healthcare Management Systems (PEO DHMS)**

- Program Executive Office Defense Healthcare Management Systems (PEO DHMS)
- Department of Veterans Affairs (DOVA)
- Naval Hospital, Bremerton, WA
  + 3 Branch Health Clinics
- 92nd Med Group, Fairchild AFB, Spokane, WA
  + 5 Branch Health Clinics
- Madigan Army Medical Center, Tacoma, WA
  + 5 Branch Health Clinics
- Naval Hospital, Oak Harbor, WA

**Initial Operating Capability (IOC) Sites**

- Washington
  - 92ND Medical Group & Aeromedical DEN SQ/SGD
  - Naval Hospital Oak Harbor
  - Naval Hospital Bremerton
  - Madigan Army Medical Center, Tacoma, WA

**Overview**

- Introduction & MHS GENESIS Overview
- MHS GENESIS Pharmacy Modules
  - Outpatient Pharmacy
  - Inpatient Pharmacy
  - Barcode Medication Administration (BCMA)
  - Inventory Management
  - Clinical Decision Support
  - Infusion Suite

**PharmNet Outpatient**

- Snapshot of Outpatient Pharmacy Module

**PharmNet Outpatient**

- General Outpatient Pharmacy Workflow
- Claims Resolution
- Formulary Management
- Automation Interfaces
- Dual CHCS/MHS GENESIS Use
- Prescription Transfers

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Prescription numbers
- Twelve digits in length
- First four digits are facility DMIS ID
- Example: Rx 0125-12345678 for Madigan

Enterprise solution allows complete prescription visibility and action
- No need to transfer prescriptions from Military Treatment Facilities (MTFs) for refills

PharmNet Retail Medication Manager
- Main patient prescription processing screen

CPOE prescriptions processed and viewed under "Ambulatory Profile"

Electronic Prescriptions
- Processed under separate tab "ERx Monitor"
- Improved safety and efficiency from legacy process

Prescriptions requiring resolution move to "PharmNet Claims Monitor"

ESI changes
- Advisory warnings can be overridden at the MTF
  - Refill too soon, most DUR codes, data integrity, alternative NDC
  - Corrections submitted using intervention & outcomes codes

Rejections may require contacting ESI for resolution
- Prior authorizations, plan limitations, some DUR codes
- CHCS refills will not generate rejection for PA
- MHS GENESIS generates PA rejection if no fill in last 365 days

PDTS advisories and rejections will not be returned during MTF CPOE
- Local warnings generate from claims data in Central Data Repository

CPOE order catalog driven from Multum content (A-Z list)

Site specific formularies identify medication status by "formulary indicators"
- Green circle: formulary preferred
- Yellow triangle: formulary, not preferred
- Red diamond: non-formulary
Formulary Management

• DHA & pharmacy committees working to standardize formulary indicator definitions
  – May include standardization of formulary, formulary not preferred, & non-formulary items

• Enterprise standardization of outpatient formularies with MHS GENESIS rollout beyond IOC
  – Tricare Uniform Formulary (UF)
  – Many considerations
    • Recapture, impact on MTF pharmacies, ESI changes

Outpatient CPOE

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Automation Interfaces

• Interface testing initiated September 2016

• All outpatient pharmacy automation vendors achieved successful interface testing
  – Innovations, Parata, ScriptPro, GSL, AudioCare

• Ongoing efforts continue to ensure interfaces are 100% operational by IOC

Automation Interfaces

• No bidirectional interface with MHS GENESIS at IOC
  – Planned to be developed post-IOC
  – Dispensing (DRX) & "pick-up" redundancy will continue

• Fixed Facility Government Approved Lab (FF-GAL)
  – Located in Auburn, WA

Dual CHCS/MHS GENESIS Use

• Pharmacies will process legacy refills in CHCS for up to 1 year

• CHCS will not "Push" data to MHS GENESIS

• New prescriptions will be entered in MHS GENESIS

• Refills processed through AudioCare/CHCS
  – Anticipate diminishing requirement with majority complete after 6-9 months

Prescription Transfers

• MTF to MTF
  – Seamless process with a standardized EHR
    • Medications remain active and visible at every MHS GENESIS location
    • Select patient's medications in Ambulatory Profile and process
    • Patients can also call in refills at current location/duty station
Prescription Transfers

- Network pharmacies
  - Click of a few buttons

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Inpatient Medication Management Process System Highlights

- Provider order entry will drive towards evidence based practice, standardization, and process improvement
  - Hierarchy for CPOE
    - PowerPlans
    - Order dosing sentences
    - CPOE IV order sets
      - Nurse review
      - eMAR display

- Pharmacy Order Verification
- Pharmacy Interventions

Inpatient CPOE: PowerPlan

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Inpatient CPOE: Order Dosing Sentences

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Inpatient CPOE: Order Details

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Inpatient CPOE: IV Order Sets

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### Barcode Medication Administration (BCMA)

**BCMA workflow changes**
- Point of entry scanning for *all* medications
- Barcode quality assurance & BCMA compliance
  - Shared responsibility – Pharmacy & Nursing
- Unique medication considerations
  - Radiology oral contrast
  - Split dosage forms (1/2 tablets)
  - Medications should be repackaged to unit of use
- Change management

**Barcode label generating equipment purchased for IOC sites**
- Tallyst AutoPack repackager
  - RF chip canisters calibrated by NDC
  - Capable of purchasing "overstock" canisters
  - Capable of repackaging non-calibrated items
  - Interface with ADCs
  - Interface with MHS GENESIS

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**PharmNet Inpatient: Intervention Tools**

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**Barcode Medication Administration (BCMA)**

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- BCMA implementation at IOC
  - Inpatient care areas, ED, radiology, pediatrics & GI (procedural), cath labs, perioperative (excludes ORs), hem/onc, AICs, immunization clinics
  - CareAdmin used for medication administration
    - Medication Administration Wizard (MAW)
    - Scan wristband and medication(s)
      - Scan pump to associate for infusions
    - Administration documented on MAR
Barcode Medication Administration (BCMA)

- Talyst AutoLabel pharmacy barcode printing software
  - NDC-driven barcode generating solution
  - Barcoding unique oral solids, topicals, inhalers, syringes, etc.

- Codonics barcode printing software
  - Generating barcode label at point of use
  - Allows flexibility for use in numerous care areas
  - Scan package/vial to generate syringe barcode label

Inventory Management

- Perpetual inventory capability at IOC
  - Controlled substance medications
    - Legacy refills will impact accountability
    - Reconciliation or transcription process for refills
  - Non-controlled medications
    - Sites batching refills have limited capability for first year
    - Large refill sites will not use inventory for at least 6-9 months

- Defense Medical Logistics Standard Support (DMLSS)
  - Interface for perpetual inventory reordering at IOC

Inventory Management

- NDCs “stacked” for similar items
  - Primary NDC for each dosage form/strength

- Outpatient & inpatient stock separated
  - Single inventory cannot be issued to inventory centers in both environments
    - Inpatient pharmacy requires separate process

- Brand name prescriptions (DAW)
  - Capability exists within PharmNet Outpatient
  - Creates complications with inventory & re-ordering

Key Points

- MHS GENESIS represents a standardized, integrated EHR solution for the MHS enterprise

- Key pharmacy applications include outpatient, inpatient, BCMA, & inventory management

- Many workflow changes will result in the need for extensive change management (BCMA, perpetual inventory)

- IOC sites in the Pacific Northwest will test MHS GENESIS to determine Fully Operational Capability

Answers to Self-Assessment Questions

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Closing Remarks

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