

SUCCESS FOR WAVES BEAUMONT AND GORDON



Winn Army Community Hospital ribbon cutting celebrating the go-live of MHS GENESIS at Ft. Stewart, GA on June 11, 2022. Photo courtesy of www.facebook.com/winncares.

On June 11, MHS GENESIS went live at Waves BEAUMONT and GORDON. After months of preparation, these Waves brought the new EHR to six MTFs throughout Georgia, New Mexico and Texas: Benning, Bliss, Gordon, Holloman, Jacksonville, Kings Bay and Stewart. Maj. Jason F. Ryncarz, Chief Health Informatics Officer, U.S. Army Medical Department Activity, Fort Stewart – Hunter Army Airfield reported that “in order to accomplish our mission to implement a new electronic health record, we [worked] with the DHA and MHS GENESIS team. This transition team [encompassed] over 10 different organizations from the private and public sector, they [all came] together to help us improve our health care delivery system.”

Waves BEAUMONT/GORDON bring MHS GENESIS deployment past the halfway mark – it is now 54% complete. There are 74 MTF commands using MHS GENESIS, meaning 4 million of the 9.6 million TRICARE beneficiaries are being served by the system. Users of the system – the MHS clinicians, technicians, doctors and nurses total 114,000.

With Wave BEAUMONT’s deployment to Holloman AFB in Otero County, all of New Mexico and its 83,501 beneficiaries are connected to MHS GENESIS, making the state fully deployed. Waves JACKSONVILLE/EGLIN are on deck, which will deploy to 24 MTFs across Alabama, Florida, Georgia, Mississippi and South Carolina. These Waves kick off September 24.

INSIDE THIS ISSUE

Message From the Program Executive Officer

2 It’s Almost DHITS Time!

OCONUS Pre-Deployment Activities Underway

3 MHS GENESIS On Display at DHA Symposium

4 Media Roundtable Highlights MHS GENESIS Successes

Introducing the MIP Minute

5 PEO DHMS Engineering Services Support JOMIS EHR Initiatives

The All New HIVE.Gov

6 What is Machine Learning?

Unifying Immunizations to Protect Tomorrow’s Forces

7 Acronym Glossary

MESSAGE FROM THE PROGRAM EXECUTIVE OFFICER



Holly S. Joers

This summer marks an important milestone in MHS GENESIS deployment throughout the enterprise – more MTFs are using MHS GENESIS than legacy systems. We are now 54% complete as of Waves BEAUMONT and GORDON deployment on June 11. With the kickoff of the Commanders' Workshop for overseas Waves in early June 2022, we are now actively

engaged with all remaining sites domestic and abroad, and on schedule to complete deployment by the end of 2023. This is a tremendous accomplishment that would not be possible without our collective effort, notably collaboration with our federal and vendor partners. A huge thank you to the MTF Commanders and their staff with boots on the ground preparing for MHS GENESIS go-live, training their providers, and communicating with their patients on how to navigate the transition period. It is certainly our pleasure to deploy MHS GENESIS with these consummate professionals. In addition, I could not be prouder of the immense work that continues to flow from PEO DHMS to improve the technology solutions supporting our nation's warfighters and their families.

In this edition, you'll read about the DHA Symposium held in May. We hosted an MHS GENESIS showcase, providing demonstrations and subject matter experts to answer questions. You'll also note stories about our tracking and reporting tools, as well as advancements with artificial intelligence and machine learning.

As always, thank you for your continued interest and support of PEO DHMS, and I look forward to continued work with you.

– *Holly S. Joers, Program Executive Officer, PEO DHMS*

IT'S ALMOST DHITS TIME!

The 2022 Defense Health Information Technology Symposium kicks off August 16 in Orlando, Florida. PEO DHMS, DHA and the FEHRM are collaborating on several sessions highlighting progress involving MHS GENESIS, virtual health, operational medicine, cybersecurity, data management, interoperability and HealthIntent capabilities. Come visit the PEO DHMS booth (416) for demonstrations on FirstNet and PowerChart clinical modules, mass readiness/mass vaccination, and revenue cycle expansion.

Click [here](#) to visit the DHITS event website including the agenda.



PEO DHMS Exhibit Booth at DHITS 2019.

DHITS 2022 Sessions

- Optimizing Virtual Health Across the MHS
- Workflow and Adoption
- Transforming Health Care Delivery Together
- MHS GENESIS: A Discussion with the Program Manager
- HealthIntent: Strategy for Greater EHR Data Integration
- Interoperability: A Global Perspective
- The Medical Common Operating Picture (MedCOP)
- The Nexus of Secondary Data: MHS Information Platform (MIP)
- Integrated Data Management
- Bringing Health Data from the Frontline
- Operational Medicine EHR Modernization Update: Roles 1 to 3
- The Secret Sauce: Collaboration, Scalability & Innovation
- Unified Patient Experience: A Technical Perspective
- Solutions now! Understanding OpMed HIT Governance
- Managing Cyber Risk for the Federal EHR
- Environmental & Occupational Exposures: Using Data to Understand their Clinical Effects

OCONUS PRE-DEPLOYMENT ACTIVITIES UNDERWAY

In June, DHMSM initiated MHS GENESIS pre-deployment activities with OCONUS MTFs through its Commander's Workshop, which brought together key leaders from the international sites: Waves LANDSTUHL, LAKENHEATH, GUAM, SEOUL and OKINAWA. DHMSM is now actively engaged with deployment activities with all remaining DoD sites and on-track to complete DoD garrison deployment by the end of calendar year 2023. "DHMSM is working the finer points and while OCONUS deployment is physically different, our team is positioned to address differences while doing all the great things they do to get people ready to adopt MHS GENESIS," said Ms. Holly Joers, Program Executive Officer, Defense Healthcare Management Systems.

MHS GENESIS ON DISPLAY AT DHA SYMPOSIUM



Ms. Cori Hughes, Ms. Holly Joers, Mr. Joe Hart and Ms. Sonja Rodriguez participate in the “Transforming Health Care Delivery Together” plenary session at the DHA Symposium on May 26, 2022.

Nearly 600 MTF commanders, deputies, senior enlisted staff, including the service surgeons general, convened in Norfolk, VA from May 24 to 26 for the DHA Symposium, marking the first time this group convened in several years. Lt. Gen Ronald Place, DHA Director, hosted the event, with a theme of “in support.” PEO DHMS had a heavy footprint, hosting an MHS GENESIS Showcase and participating in several speaking panels.

At the MHS GENESIS Showcase, subject matter experts from PEO DHMS, the FEHRM, LPDH and DHA provided attendees with live demonstrations and discussions about the system’s capabilities. The showcase also featured a video tour of MHS GENESIS and an Ask Me Anything genius bar providing attendees the opportunity use the system with an over-the-shoulder peer expert. Ms. Holly Joers, program executive officer for PEO DHMS joined Mr. Joe Hart, Deputy Executive Director, Program Management Office, VA Electronic Health Record Modernization Integration Office; Ms. Sonja Rodriguez, Assistant Program Executive Officer, Command, Control, Communication, Computers, Cybersecurity and Intelligence (C5I), United States Coast Guard; and Ms. Cori Hughes, Director of Program Integration for PEO DHMS and the FEHRM, for a closing plenary session about the federal EHR.

Mr. Brad Marsh, supporting the clinical workstream at the FEHRM, moderated. The panelists discussed the status of their deployments, lessons learned and items that excite them about the future. Ms. Joers described the success of the Pay-it-Forward program, an adoption strategy using current MHS GENESIS users from previous site deployments to

provide peer support. “Nothing takes the place of hearing from those who have already done it,” said Ms. Joers.

Mr. Chris Nichols, EIDS Program Manager, hosted a breakout session about MHS GENESIS data management with Col. Thomas Cantilina, DHA Chief Health Informatics Officer. They talked about standardization of workflows and leveraging MHS GENESIS to reinforce clinical practice standards, measure compliance and address adoption gaps.

Mr. David Gravseth, DHMSM Virtual Health Integration Assistant Program Manager, spoke during a panel about optimizing virtual health across the MHS. Col Cantilina moderated, with Lt. Col. Nathan Reynolds, DHA Virtual Health Chief and Lt. Col Gary Legault, Director for the MHS Virtual Medical Center, also participating. They addressed the virtual health capabilities available to patients and providers across the MHS. “Video visits have proven to increase productivity and patient satisfaction,” said Gravseth. Panelists also spoke about the advantages to MHS Video Connect, with Lt. Col. Legault adding, “MHS Video Connect works, it is simple and easy to use.”

MHS GENESIS Showcase Kiosks

- Mass Readiness
- Coordinated Clinical Care (Powerchart, FirstNet and Dentrix)
- Data and Analytics (Lights On/Advance, Discern Reporting/HealtheAnalytics)
- EIDS
- Patient Portal
- MHS Video Connect
- Joint Health Information Exchange
- HealtheIntent/HealtheRegistries



The MHS GENESIS Showcase featured 10 kiosks with subject matter experts to discuss EHR capabilities.



Mr. David Gravseth speaks at the “Optimizing Virtual Health Across the MHS” panel on May 25.

MEDIA ROUNDTABLE HIGHLIGHTS MHS GENESIS SUCCESSES

On June 21, Ms. Holly Joers hosted a media roundtable with Maj. Gen. George “Ned” Appenzeller, the MHS Electronic Health Record Functional Champion and Mr. Bill Tinston, FEHRM Director. Seven media outlets participated and discussed DoD’s MHS GENESIS deployment, and the current and the future state of the common federal electronic health record.

Media asked about project schedule and budget. Ms. Joers lauded the deployment of MHS GENESIS as it remains on schedule to deploy at all planned locations by the end of 2023 and on budget. Ms. Joers stated that the latest deployment to Waves BEAUMONT/GORDON on June 11, reached a tipping point with more MTFs operating on MHS GENESIS than legacy systems. Ms. Joers also explained, “As we head into the final stretch, we are focused on optimizing the new functionalities that MHS GENESIS brings to the enterprise such as the new trauma and burn capabilities implemented at Brooke Army Medical Center, the new revenue cycle expansion capabilities that will better capture the cost of providing care and looking at how we can improve the patient and provider experience.”

When asked why the DoD experienced fewer growing pains than the VA in adopting the system, Ms. Joers said the DoD is in a “very different place in the maturity curve. We have been able to learn and grow, recognizing how we do workflows, that one person’s job affects the next one down the line,” Ms. Joers said. “We took some time to really understand and appreciate that as we have rolled out, so we’re in a different place.”

The media was interested in downtime reported within the past few months. Mr. Tinston explained, “Within any IT system, we do have to look at disruptions to service - we take them very seriously. But in terms of outages from a health care perspective, we have processes and procedures to ensure health care operations continue in the event that there is downtime. We have metrics in place to look at service performance. We are all looking very closely with our industry partners to make sure we identify improvement opportunities in the architecture



to make sure that we have a resilient architecture that’s highly available.”

Maj. Gen. Appenzeller explained the usefulness of MHS GENESIS from a provider’s perspective. “The electronic health health record is an awesome system for helping us provide safe, standardized, effective patient care. I love the tools, and I love having the electronic health record,” he said. “I’m an emergency medicine physician, so being able to see what has gone on in someone’s record is pretty important to me.”

The federal EHR is longitudinal, meaning it spans from the day a member enters the service through the entirety of veteran status so veterans do not have to circle the globe gathering health records from inpatient and outpatient providers at every duty location. Furthermore, if care is received outside of the military health system, records are available via the joint Health Information Exchange, which brings in health data from participating community providers.

Maj. Gen. Appenzeller further stated, “As a provider, I always expected my electronic systems to go down at some point. As medical providers we take care of patients no matter what the circumstances and we always take the best care of patients we can. This is a phenomenal improvement over what we had 20 or 25 years ago when I started taking care of patients,” he said. “As a provider, I really appreciate what this is doing for the safety of our patients and the outcomes of our patients.”

INTRODUCING THE MIP MINUTE



The Military Health System Information Platform (MIP) is central to how the MHS makes data work for patients and providers. While CarePoint provides access to MHS data, much more goes on behind the scenes. PEO DHMS looks forward to bringing this complex yet sophisticated data broker tool that pumps data around the MHS for use and optimization. Find our most recent MIP Minute episodes below, and see what the MIP is all about!

[EPISODE 1](#)

[EPISODE 2](#)

PEO DHMS ENGINEERING SERVICES SUPPORT JOMIS EHR INITIATIVES

PEO DHMS continues to apply modern information technology solutions to federal health care. They recently provided engineering services that enabled JOMIS to conduct a series of events to support EHR software and hardware development. Services included use of the facility space at PEO DHMS' Medical Enterprise Test Innovation Center (METIC) and the facility management, data connections, cloud services, virtualization, cybersecurity, event planning and networking support required to conduct the events. Through their engineering services, including the METIC, PEO DHMS provides an efficiency mechanism for DoD's electronic health record systems evaluation processes that enables improved solutions at the speed of relevancy.

JOMIS conducted an event at the METIC in March. Three vendors separately briefed their Roles 1 and 2 software solutions to JOMIS as part of the selection process. By providing the METIC and its services, PEO DHMS enabled JOMIS to conduct vendor engagements in a government-owned secure and standardized physical environment.

These evaluation activities accelerate the selection process enabling the program offices to move through the acquisition process more judiciously, benefiting both government and industry. In this case, JOMIS efficiently awarded a contract to two down-selected vendors to begin the Commercial Solutions Opening prototyping phase after the conclusion



Field medicine demonstration at MacArthur Field, Joint Base San Antonio, Fort Sam Houston, TX in 2018. Photo by Francis Trachta.

of the March event. PEO DHMS supported JOMIS' agile evaluation and selection process by providing engineering services, thus reducing costs and increasing efficiency.

JOMIS conducted two additional events at the METIC as part of their effort to improve the MHS GENESIS-Theater solution which relates to Role 3 in the continuum of care. JOMIS, along with its vendor partners, are developing MHS GENESIS-Theater, a condensed version of MHS GENESIS, used in theater hospital operational medicine environments.

The first MHS GENESIS-Theater Build 4 event consisted of a technical design review that captured feedback on the MHS GENESIS-Theater Build 4 hardware solution from PEO DHMS leadership, JOMIS leadership and military service representatives. The event marked JOMIS' first demonstration of progress made on the system. The second MHS GENESIS-Theater Build 4 event provided doctors, nurses, medics and other specialty care representatives the opportunity to evaluate and provide feedback on the MHS GENESIS-Theater Build 4 software solution. JOMIS will use the feedback from the technical design review and the clinical evaluation to improve the MHS GENESIS-Theater hardware and software solutions.

The MHS GENESIS-Theater events required larger physical space capacity than previously available to JOMIS before the METIC opened its doors in 2020. In addition, the clinical evaluation required connection to an environment in the PEO DHMS Testing Infrastructure readily available at the METIC. Since PEO DHMS met capacity and capability requirements, JOMIS plans to continue leveraging the METIC to support their agile acquisition processes.

Prior to JOMIS' March 2022 events, PEO DHMS only hosted testing, development and integration activities at the METIC. The JOMIS vendor engagement and MHS GENESIS-Theater events demonstrated PEO DHMS' ability to provide additional capabilities to support a wider scope of event types. The events also highlighted PEO DHMS' capability to provide engineering solutions through the METIC to transform the delivery of health care and advance health data sharing through a modernized EHR.

THE ALL NEW HIVE.GOV

We've updated our website! In an effort to further health care for service members and their families, the HIVE provides an online space for acquisition collaboration. Supporting group discussion, a newsfeed and regularly updated opportunities, the HIVE allows PEO DHMS to connect with current partners and develop new connections with health IT innovators. Check out what the buzz is all about at our new site, [HIVE.gov](https://hive.gov).



WHAT IS MACHINE LEARNING?

Machine learning (ML) is a type of artificial intelligence where software applications use algorithms to train themselves to become more accurate without a human explicitly programming them to do so. For example, a ML application can be designed to recognize shoes in a picture. The ML application is given a large dataset where pictures of shoes are manually tagged by humans, and the application uses this “training dataset” to write its own code to detect shoes in pictures. As the training dataset grows over time, so will the accuracy of the ML application’s shoe detection.

Artificial intelligence – and ML in particular – is of great interest to the MHS. From predicting health outcomes for service members to identifying novel forms of treatment, ML has the potential to make the MHS significantly more effective at improving health and readiness. The MHS Information Platform’s (MIP) massive datasets of treatments administered, diagnostic results, health outcomes and now biological data on individual service members offers immense ML opportunities. Several ML projects were completed using demographic and medical encounter data from the MIP. MIP data is currently being used in a joint venture between DHA and VA to improve predictive analytics in three areas: opioids, suicide, and traumatic brain injury (TBI). In 2021, the ML application was 88.2% effective at predicting the onset of mental health conditions among service members suffering a TBI.

While MIP data is used for ML already, the platform itself has several limitations that increase the time for data scientists to build new ML projects. MIP data and analytics tools must be accessed using a virtual desktop in the Application Virtual Hosting Environment which times out after 24 hours. Since ML applications often process huge datasets, runtimes can easily exceed this 24-hour limit. To overcome the timeout issue, data scientists download the data, train their AI offline and then re-upload the trained algorithm which is not a recipe for efficiency. Furthermore, the MIP currently has no code library or shared software development platform, so building new ML applications and projects in the MIP is generally done from scratch each time. Finally, cybersecurity review always takes extra time. Each new ML data library must be restricted and scanned independently in order to become a “trusted” library which prolongs the ML development process.

To speed up the development of ML projects and applications within the MIP, EIDS is developing a Machine Learning Pipeline (MLP). The MLP will be a suite of software development tools with a proven ML code library hosted on the DHA DevSecOps Community Cloud platform, which does not have a 24-hour timeout restriction. Once the MLP is completed, data scientists will spend less time on operationalization and more time developing better, smarter ML applications. Crucially, data produced by ML models in the pipeline will be fed directly into MIP applications for end users. For example, a model that predicts which veterans are at high risk of homelessness could feed directly into a workflow application for VA social workers to begin pre-emptive outreach. The artificial intelligence and ML opportunities to improve health care delivery are endless!

UNIFYING IMMUNIZATIONS TO PROTECT TOMORROW’S FORCES



The MHS Information Platform - Immunization, Tracking & Reporting (MIP-ITR) capability went live in May, replacing the Defense Enrollment Eligibility Reporting System for data broker functions and becoming the DoD’s single source for immunization records.

MIP-ITR integrates data used for performance, health care evaluation and enabling clinical teams and data users to ask critical questions across various levels to derive clinical and business insights. MIP-ITR drives advancements in population health care by harmonizing data across ITRs and relevant clinical systems to create a comprehensive view of invaluable immunization records. Through this capability, the MIP established bidirectional data exchange interfaces with the Services & MHS agencies to become the single source of truth for authoritative immunization records.

The year-long project includes several enterprise benefits:

- Integrates and standardizes ITRs and clinical system data to display a reliable and robust view of immunization records
- Establishes a single source of truth for authoritative immunization records
- Empowers creation of enterprise reports and visualizations that directly impact senior leader decisions

MIP-ITR provides one platform for all immunization records, supports readiness across military health and grants individuals’ the ability to assess and visualize data across all levels all while living within the walls of the MIP. As a rich trove of health care data, MIP-ITR enables the joining of information across disparate health domains, provides standardized, clean data for all immunization records and empowers decision making in health care, readiness, logistics and critical mission areas.



GLOSSARY

AFB – Air Force Base

AI – Artificial Intelligence

C5I – Command, Control, Communication, Computers, Cybersecurity and Intelligence

DHA – Defense Health Agency

DHITS – Defense Health Information Technology Symposium

DHMSM – DoD Healthcare Management System Modernization

DoD – Department of Defense

EHR – Electronic Health Record

EIDS – Enterprise Intelligence and Data Solutions

FEHRM – Federal Electronic Health Record Modernization

HIT – Health Information Technology

IT – Information Technology

JOMIS – Joint Operational Medicine Information Systems

LPDH – Leidos Partnership for Defense Health

MedCOP – Medical Common Operating Picture

METIC – Medical Enterprise Test Innovation Center

MIP – MHS Information Platform

MIP-ITR – MHS Information Platform - Immunization, Tracking & Reporting

MHS – Military Health System

ML – Machine learning

MLP – Machine Learning Pipeline

MTF – Military Treatment Facility

OCONUS – Outside the Continental United States

OpMed – Operational Medicine

PEO DHMS – Program Executive Office, Defense Healthcare Management Systems

TBI – Traumatic Brain Injury

VA – Department of Veterans Affairs