

Defense
Healthcare
Management
Systems



FISCAL YEAR 2022

REACHING THE
PEAK

ANNUAL REPORT

WELCOME



MESSAGE FROM THE PEO

Welcome to the Program Executive Office, Defense Healthcare Management Systems (PEO DHMS) Fiscal Year 2022 annual report. This year showcased our organization's perseverance and dedication to innovation with a broad range of capabilities that serve our mission to deliver a modernized electronic health record (EHR) for service members, veterans and their families.

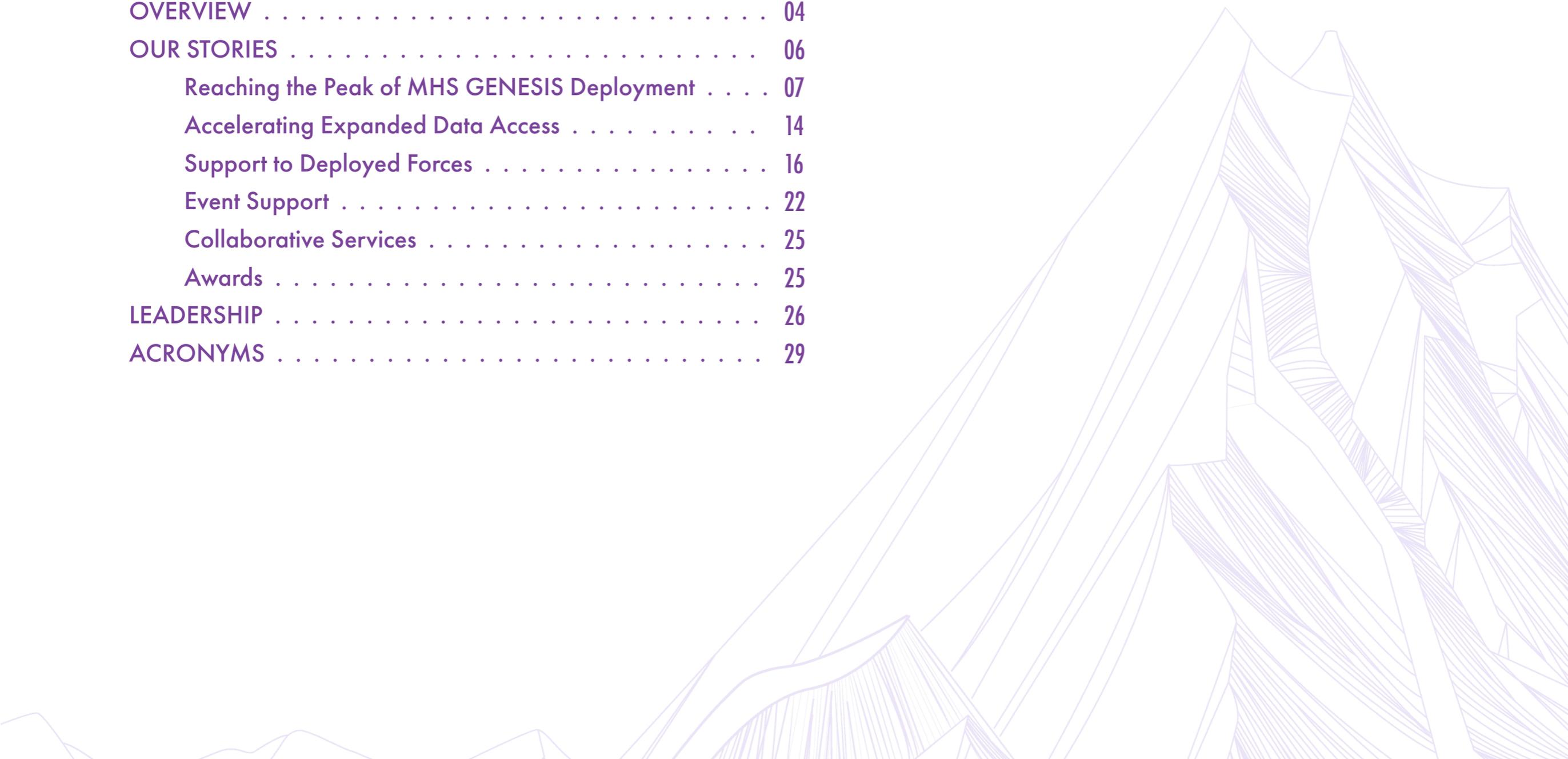
This summer marked an important milestone, as we've reached the peak of MHS GENESIS deployment. More military treatment facilities (MTF) operate on MHS GENESIS than legacy systems. With the latest go-live in September, MHS GENESIS is 67% deployed across the enterprise. As we continue with each site launch of MHS GENESIS, we near the end of just the beginning of our journey. We began pre-deployment activities with MTFs outside the U.S. and remain on schedule to complete implementation by the end of calendar year 2023. Continuing this journey, we're focused on optimizing new functionalities that will help us to better understand the total cost of care and readiness, while also exploring new ways to improve the patient and provider experience.

Inside this year's annual report, you'll read about the incredible achievements of PEO DHMS and its program offices in areas including virtual health, revenue cycle expansion or RevX, operational medicine, data science and interoperability. We presented at numerous conferences and events this year, which included the return of the Defense Health Agency Symposium. Our team gave powerful presentations about the management of health care data, machine learning and artificial intelligence, and uniting the workforce for mission completion.

Thank you for your continued support of this outstanding organization. I am really proud of the great work of this team and look forward to another great year.

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MISSION STATEMENT



Transform delivery of patient-centered health care and advance data sharing through modern solutions.

PATIENT-CENTERED CARE



It's not about IT. It's about people.

Ensuring we meet the needs of the patient determines our success. The health and safety of our most important asset—our people—is our highest priority.

OVERVIEW

PEO DHMS is an acquisition organization that oversees three program management offices (PMO): DoD Healthcare Management System Modernization (DHMSM), Joint Operational Medicine Information Systems (JOMIS) and Enterprise Intelligence & Data Solutions (EIDS). These PMOs acquire, deliver and support information technology and services that enable data sharing and modernization of the EHR.

Together, these offices transform the delivery of health care for active duty military, veterans and their families by achieving nationwide interoperability and modernization of the Department of Defense's EHR, MHS GENESIS, as well as other capabilities. MHS GENESIS integrates inpatient and outpatient records, replacing select legacy DoD health care systems and connecting medical and dental information across the continuum of care.

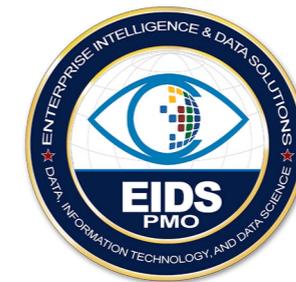
PROGRAM MANAGEMENT OFFICES



The JOMIS PMO provides interoperable medical information technology capabilities to the warfighter across the full spectrum of military operations.

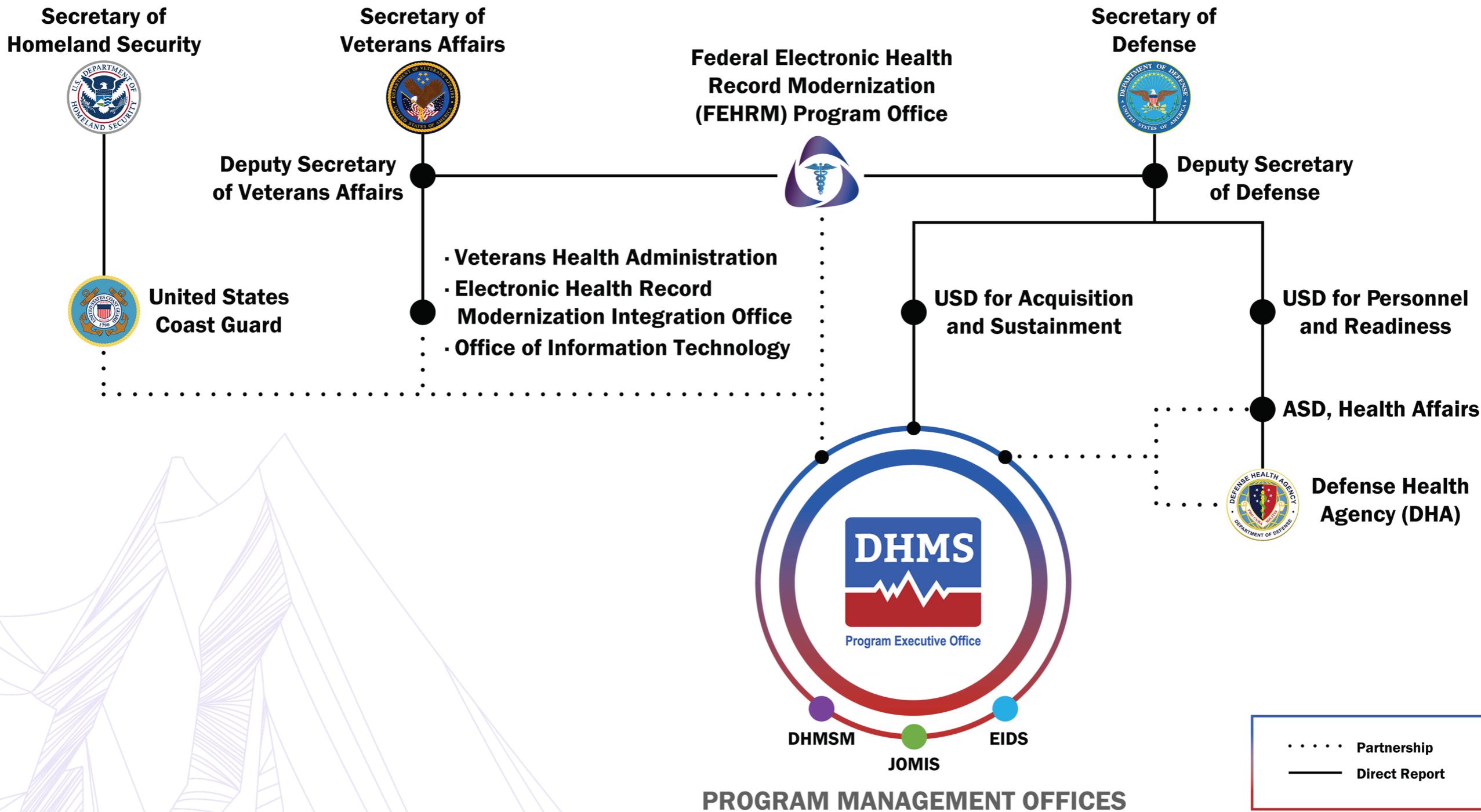


The DHMSM PMO oversees the deployment of MHS GENESIS.



The EIDS PMO supports the strategic goals of the MHS and facilitates informed decision-making through the delivery of robust information services and data in a timely, relevant and actionable manner.

PEO DHMS ORGANIZATION CHART



OUR STORIES

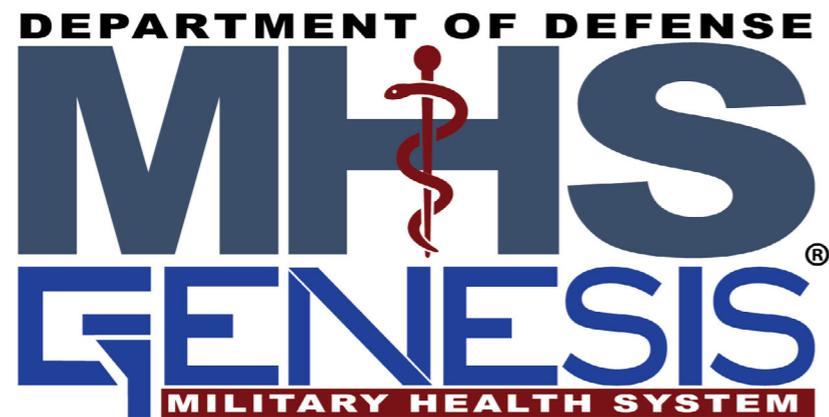
REACHING THE PEAK OF MHS GENESIS DEPLOYMENT

FY21 Deployment Recap

MHS GENESIS, DoD's name for the single common federal EHR, is critical to DoD's commitment to optimize health care delivery for both patients and providers. MHS GENESIS streamlines accessing and sharing patient information, enhances patient record retrieval and facilitates the seamless exchange of health care information between military and community providers including geographically distanced clinics.

In 2015, DoD awarded the MHS GENESIS contract to Leidos Partnership for Defense Health (LPDH) to modernize legacy EHR capabilities across the Military Health System (MHS). MHS began deploying MHS GENESIS at four interim operational capability (IOC) sites in the Pacific Northwest in 2017. The IOC sites provided PEO DHMS and DHA an opportunity to evaluate impacts to care access, understand processes and workflows, develop governance and issue resolution processes and improve network and IT infrastructure. DoD learned that standardization is the key to enterprise-wide health IT solutions, especially for the federal EHR to ensure high quality, safe and consistent patient and provider experiences across the continuum of care.

Full operational capability in 23 deployment waves began in 2019 with Wave TRAVIS. Although the COVID-19 pandemic hit in March 2020, deployment pressed forward at two waves: NELLIS and PENDLETON. DoD continued deployment in 2021, completing three waves: SAN DIEGO, CARSON/CARSON+ and TRIPLER. By the end of 2021, more than 30 MTFs implemented MHS GENESIS.



MHS GENESIS is a registered trademark of the Department of Defense, Defense Health Agency. All rights reserved.

“I am immensely proud of the collective work across the entire Military Health System to continue deploying MHS GENESIS during the pandemic. It is much more than a single electronic health record that stays with a patient during their entire lifecycle in the MHS and VA. It is transformative by design to help us improve patient safety, communication and ultimately better health outcomes.”

LTG Ronald Place, DHA Director

FY22 Deployment Progress

In January 2022, Waves Brooke Army Medical Center (BAMC)/LACKLAND successfully deployed MHS GENESIS to six MTFs in Texas, which brought new complex service offerings, such as the Secretarial Designee program, comprehensive burn specialty care and comprehensive extracorporeal membrane oxygenation programs. As the sole Level I Trauma Center within the MHS, BAMC serves as the premier medical readiness training platform for both the Army and the Air Force; 40 of BAMC's hospital beds are designated for the Army Institute for Surgical Research Burn Center. BAMC's hospital campus also houses the Center for the Intrepid, a preeminent extremity injury rehabilitation center, which advances rehabilitation and recovery for severely injured combatants.

Multiple units at BAMC shared their appreciation of the support during the go-live, while highlighting a number of successes. General care providers at BAMC's mass COVID-19 testing site reported the completion of 1,540 COVID-19 tests in the first week of go-live, using the system's mass vaccination module. Also, providers in the trauma unit expressed their appreciation for enhanced safety features, including the ability to rapidly detect missed or delayed doses. The new functionalities demanded by BAMC's unique medical capabilities benefit the entire MHS.

United States Military Entrance Processing Command (USMEPCOM) deployed MHS GENESIS at 70 in-processing stations across the country in February 2022. The mass readiness module within MHS GENESIS made an immediate impact by enabling DoD to process new recruits in a fraction of the time of legacy systems. For example, the Air Force Academy used MHS GENESIS to process 1,200 cadets in six hours, outperforming its previous record by three hours. MHS GENESIS automatically pushed health data such as vitals, medical conditions, medications, labs, immunizations and allergies to the Air Force readiness system, which previously took months to scan and upload. Screening is not only faster, but it is also more reliable thanks to data sharing through the joint health information exchange and trusted exchange partners. Physicians screening new recruits now access historical health information automatically without reliance on paper records or self-disclosure. Ultimately, better decisions are made regarding waivers and identification of potential treatment plans are made upfront saving DoD time and money while increasing the medical readiness of the force.

In March 2022, Waves HOOD/BRAGG launched MHS GENESIS at 14 MTFs across five states, increasing the total number of deployed MTFs to 68.

MHS GENESIS reached peak deployment coast-to-coast in June 2022. Waves BEAUMONT/GORDON brought six new MTFs throughout Georgia, New Mexico and Texas. These two waves passed the overall halfway mark at 54% complete with more MTFs using MHS GENESIS than legacy systems. June 2022 also marked a critical juncture in paving the way for overseas sites. DHMSM initiated its Commander's Workshop, bringing together key leaders from international sites in Waves LANDSTUHL, LAKENHEATH, GUAM, SOUTH KOREA and OKINAWA.

In September 2022, Waves JACKSONVILLE/EGLIN successfully deployed MHS GENESIS at 18 new MTFs, bringing the total number of MTFs using MHS GENESIS to 92 or 67% complete. There are more than 5.6 million of 9.6 million beneficiaries engaged with the system, and approximately 127,000 MHS clinicians, technicians, doctors and nurses use MHS GENESIS.



MTFS

92 of 138



ESTIMATED ELIGIBLE BENEFICIARIES SERVED BY MHS GENESIS

5.6M of 9.6M



USERS

127,000 of 200,637

Coast Guard Completes Ashore MHS GENESIS Deployment

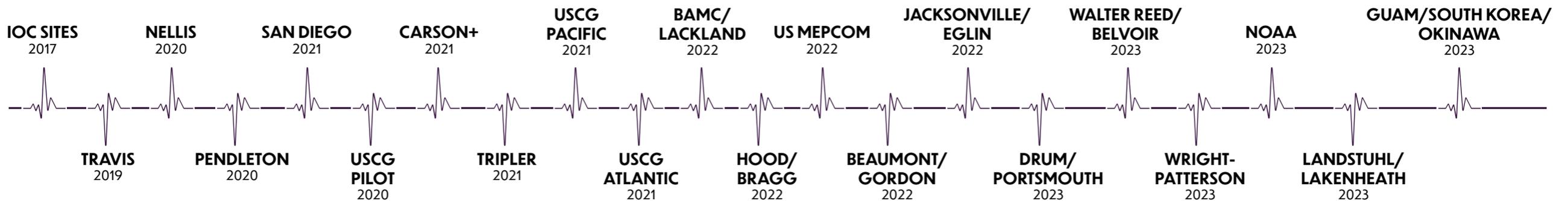
The U.S. Coast Guard (USCG) successfully deployed MHS GENESIS across numerous facilities throughout the country. Leveraging lessons learned from a four-site pilot in 2020 helped carry momentum forward into the PACIFIC and ATLANTIC Waves. The U.S. Coast Guard PACIFIC and ATLANTIC Waves, known as Segment A, total 43 ashore clinics and 66 ashore sickbays. Wave PACIFIC added 31 medical facilities on August 2021 and Wave ATLANTIC added 26 clinics and 48 sickbays in November 2021. Segment B includes modernization of the U.S. Coast Guard’s entire medical and dental radiology system. Segment C will extend MHS GENESIS to all afloat sickbays, but first ensuring connectivity offshore must be solved. The U.S. Coast Guard is coordinating with DHMSM to tackle this challenge and aligning with JOMIS to acquire and modernize units afloat.

Lessons Learned, Significant Drivers of Success

Successful deployment of MHS GENESIS is largely due to leveraging lessons learned from previous waves, which advance the preparation, training and deployment approach in new locales and simultaneously standardizes and refines use of the system across the enterprise.

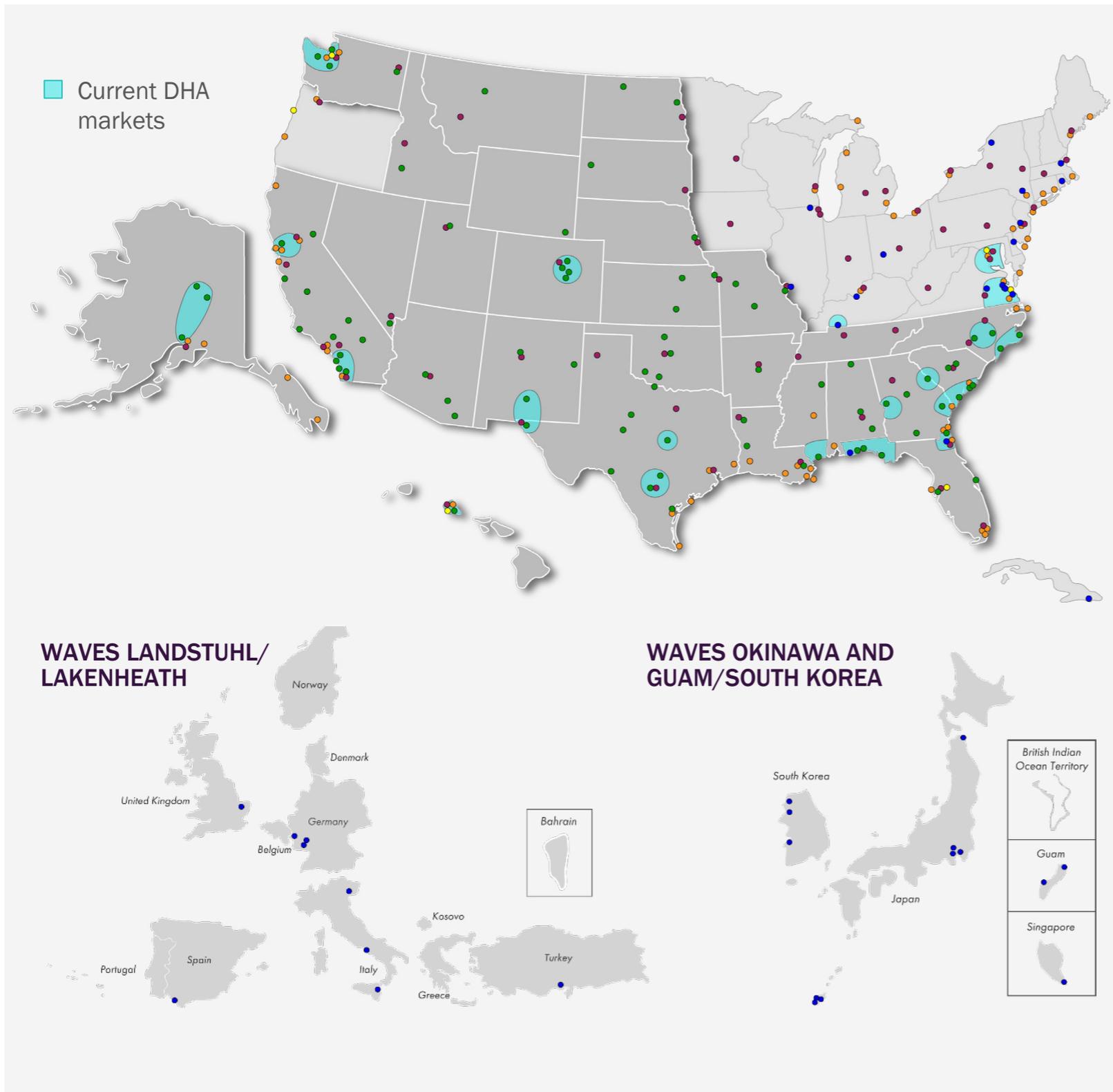
Transformation requires the right mindset to accept enterprise standardization. Leadership on the ground, especially MTF commanders and functional champions, are key to leading transformation efforts and strengthening the enterprise-wide approach. Further, DoD used an iterative approach focused on clinical capability before integrating business operation upgrades to galvanize core functionalities affecting patient safety and clinical quality first.

In addition to adjusting the training approach to focus on workflows, DoD created a governance structure using informatics steering committees for long-term management at local sites, a solution and adoption board to manage configuration change requests, bolstered the “peer expert” program and adopted a “pay-it-forward” approach that built confidence from users already on the system.



MHS GENESIS remains on budget and on schedule to complete nine additional waves by end of calendar year

MHS GENESIS DEPLOYMENT MAP



Deployment Waves Completed

- IOC SITES (2017)
- WAVE TRAVIS SITES (2019)
- WAVE NELLIS SITES (2020)
- WAVE PENDLETON SITES (2020)
- WAVE SAN DIEGO SITES (2021)
- WAVE CARSON+ SITES (2021)
- WAVE TRIPLER SITES (2021)
- WAVE BAMC SITES (2022)
- WAVE LACKLAND SITES (2022)
- WAVE BRAGG SITES (2022)
- WAVE HOOD SITES (2022)
- WAVE BEAUMONT SITES (2022)
- WAVE GORDON SITES (2022)
- WAVE EGLIN SITES (2022)
- WAVE JACKSONVILLE SITES (2022)

- USCG PILOT SITES (2020)
- USCG PACIFIC SITES (2021)
- USCG ATLANTIC SITES (2021)

USMEPCOM SITES (2022)

NOAA SITES (2023)

Map legend/
colors

- DoD sites deployed (completed)
- USCG sites (completed)
- US MEPCOM sites (completed)
- Future NOAA sites

Future DoD sites (Parent Commands)

- WAVE DRUM (2023)
- WAVE PORTSMOUTH (2023)
- WAVE WALTER REED (2023)
- WAVE BELVOIR (2023)
- WAVE WRIGHT-PATTERSON (2023)
- WAVE LANDSTUHL (2023)
- WAVE LAKENHEATH (2023)
- WAVE GUAM/SOUTH KOREA (2023)
- WAVE OKINAWA (2023)

● 9 waves "in flight"

RevX: Expanding Revenue Cycle Capabilities

New RevX capabilities featuring enhanced medical coding and patient accounting deployed as part of the MHS GENESIS baseline in September. When planning MHS GENESIS deployment activities, DoD decided to implement clinical functionalities first before optimizing business functions. RevX uses a clinically driven revenue cycle to seamlessly integrate business operations functions with clinical workflows in MHS GENESIS. The new revenue cycle capabilities leverage commercial best practices, replace outdated, paper-based processes and streamline patient administration from check-in to check-out. Enhanced medical coding enables staff to calculate the actual cost of care from the patient's first encounter through completion of care and improves claims processing for patients shared with other health care delivery systems. The new RevX capabilities also allow DHA to reduce dependencies on legacy systems such as ABACUS and more to effectively manage information technology (IT) system costs.

Unveiled in April 2022, IOC sites Bremerton and Oak Harbor provided valuable lessons learned, such as initiating the electronic data interchange enrollment process earlier with the MTFs and educating the clinical community and senior business advocates about their roles. Future deployments will incorporate changes focused on effective management of work queues, charge conversions, self-reporting and timelines to complete. As of December 1, the full revenue cycle suite of capabilities is available at IOC sites (Bremerton, Oak Harbor, Madigan and Fairchild) and 10 Waves (JACKSONVILLE, EGLIN, TRAVIS, PENDLETON, NELLIS, SAN DIEGO, TRIPLER, CARSON/CARSON+, BEAUMONT and GORDON).



HEALTHeREGISTRIES

During FY2022, the FEHRM continued to implement the clinical registry solution HealtheRegistries for users of the federal EHR. HealtheRegistries is a data registry solution for clinicians and end users to track, manage and promote quality measures for improved health outcomes across the DoD and Veterans Affairs (VA) beneficiary population through integrated workflow recommendations called health maintenance reminders. The FEHRM implemented the pediatric wellness and maternity registry and constituent measures. There are now 23 registries contained within the federal EHR, including diabetes, COPD, advanced liver disease, heart failure, hypertension, asthma, chronic kidney disease and 10 pediatric and maternity registries, among others.

HealtheRegistries includes five key feature areas: workflow integration, health maintenance recommendations, registries, scorecards and analytics. Clinical data outcomes are shared to HealtheRegistries via the HealtheIntent platform longitudinal record.

As part of the MHS GENESIS capability enhancement implemented September 2022, DoD released a HealtheRegistries performance scorecard to promote highly informed clinical decisions with evidence-based results using detailed facts and score-based metrics. The performance scorecard is contained within a new web page inside MHS GENESIS that offers providers supporting facts and composite scores. It allows external data to be factored into the capability algorithms that rank care opportunities for impact and enable broader insights. For example, a clinician seeing a patient assigned to the diabetes registry is prompted via a health maintenance reminder to order an A1C blood test. The performance scorecard measures whether the provider orders the test and whether the patient complies with the doctor's order. DoD seeks greater than 80% compliance on health maintenance reminders.

The scorecard not only measures provider and patient compliance to act upon health maintenance reminders, it also measures how often the order is completed over time, along with the patient's progression. The scorecard creates a more informed provider-patient relationship because providers can track patient compliance with treatment plans. It improves the patient experience by rendering meaningful information at the right time and reduces provider workload by informing the health care team how the patient is being cared for across one or more registries.

The scorecard allows federal partners to converge on the same clinical decision support tool to assist population health efforts and medical readiness. In April 2022, the Military Health System Population Health Portal Registries team rapidly delivered a tool that allowed the DHA to capture the number of COVID-19 at-home test kits dispensed from MTFs. In addition to the tracking tool, the team delivered analytic capabilities that allow DHA leadership to track the distribution of home test kits across the enterprise. The Registries team also delivered a registry aimed at improving the population health of high-risk obstetric beneficiaries and modified some capabilities in existing registries—improving the population health capabilities available to clinicians. Since April 2022, one addition to the Quick Look Registry identified 14 previously undiagnosed patients who had myeloid neoplasms within the National Capital Region (NCR). This best practice expanded to other markets and clinicians from the NCR area, collaborating with San Antonio immunologists and hematologists to assess 60 additional patients who were at high risk of myeloid neoplasms.

MHS Video Connect Program: Success Stories and the Path Ahead

Deploying MHS GENESIS during a pandemic brought a new set of challenges, but also jumpstarted unforeseen opportunities such as optimizing virtual health capabilities that include MHS Video Connect. MHS Video Connect, a secure audio and video conferencing solution available for all MTFs, successfully launched in fall 2021. By May 2022, 100% of parent MTFs rolled out MHS Video Connect in 37 markets.

MHS Video Connect continues to successfully engage both providers and patients by capitalizing on the benefits offered by telemedicine to best operationalize patient care, reduce travel costs and increase opportunities for providers to consult with one another without leaving their primary workplace. PEO DHMS continues to look for ways to enhance MHS Video Connect. A key example, the electronic signature systems implemented in June 2022, removed the need to print and scan documents for submission.

Although MHS Video Connect is unique because it is usable with or without MHS GENESIS, completing its integration for all MHS GENESIS waves, including the U.S. Coast Guard, remains a priority. The group will further explore the deployed, remote and operational forces usage of MHS Video Connect. Ultimately, full implementation will ensure patients can securely access their health data on-demand via mobile devices.

The ongoing success of MHS Video Connect centers on the dedication of the DHMSM team's effort in conjunction with its ongoing partnership with the VA, which offered critical advice on leveraging its robust telemedicine framework.



Very, very cool! I just had a successful video visit with an active duty Marine at the embassy in Bogota, Columbia for a bee venom evaluation. Video quality is near HD and there is no lag via his personal cell on the Columbia cell network.

Allergist at NMC San Diego



MHS Video Connect By the Numbers

| Metric | DEC 2021 | SEPT 2022 |
|--------------------------------|----------|-----------|
| US parent MTF Rolled-out (%) | 100% | 100% |
| Supported States/Markets | 37 | 39/All |
| Cumulative Participants | 42,347 | 173,185 |
| Cumulative Conferences | 25,157 | 96,559 |
| Weekly Conferences | 861 | 2,438 |
| Weekly Participants | 1,474 | 4,894 |
| Maximum Concurrent Conferences | 32 | 120 |
| Provisioned Users | 8,560 | 132,591 |

Captain James A. Lovell Federal Health Care Center (FHCC) Federal EHR Implementation

In coordination with the VA's Electronic Health Record Modernization Office and the PEO DHMS/DHMSM, the FEHRM continued to execute the Enterprise Requirements Adjudication process for FHCC during FY2022. Topics that inform the FHCC Federal EHR Implementation Plan were prioritized and included those that require a decision to deconflict the build between DoD and VA and those that require a decision on the execution, or approach, for the implementation. The intended outcome is convergence, where possible, between the departments for the federal EHR design.

The FEHRM continues to lead project planning and execution activities for the interagency FHCC EHR Implementation Project Team, guiding weekly leadership and working-level meetings, establishing cross-department working groups, outlining roles and responsibilities and coordinating national timelines and activities.

ACCELERATING EXPANDED DATA ACCESS

Joint Health Information Exchange (HIE)

MHS beneficiaries benefit from inclusion in the joint HIE, a secure gateway launched in 2020 to connect health information systems from the DoD, VA and other federal entities with each other and private sector partners. This exchange allows all MHS health care providers and other partners to access specific patient health information that may be helpful when providing care.

The joint HIE is now one of the largest and well-connected HIEs in the country, connecting more than 129,000 external provider sites (29,000 plus CommonWell provider sites and 100,000 plus eHealth Exchange provider sites), including 65% of private sector hospitals.

The joint HIE is a modernized health data sharing capability that enhances the ability of DoD, VA and U.S. Coast Guard to share bidirectional EHR data quickly and securely with participating community health care providers. The FEHRM monitors the departments' progress toward consistent, secure and reliable health data exchange by tracking joint HIE partner onboarding, as well as joint HIE transactions between the departments and private care partners.

The joint HIE plans to continue expansion with community partners. The national network of exchange partners provides secure access to clinical information of more than 120 million patients nationwide.

Trusted partner interoperability pre-populates data in the electronic health record at the point of care, saving valuable time providers spend with their patients instead of searching for data. This trusted partnership concept and the approach of data sharing is truly transformational.



65%
**(of private sector
hospitals)**



**CommonWell
Provider Sites**
29,000+

**CommonWell
Patient Enrollment**
15,370,728



**Documents
Shared**
Inbound: ~6.1 m/month
Outbound: ~48 m/month



**eHealth Exchange
Provider Sites**
100,000+



**eHealth Exchange
Partners**
263





What's New in Joint Longitudinal Viewer (JLV)

JLV continues to increase and improve access to patient health records from community partners. In December 2021, JLV released an enhancement that includes additional data, as well as performance and usability improvements. JLV's widgets can access new data and organize it in a useful way. Specifically, the immunizations widget now displays pharmacy immunizations data received from the Pharmacy Data Transaction Service, which provides immunization records from community partners: CVS, Rite Aid, Walgreens and Walmart. The allergies widget now displays allergy data received from the Theater Medical Data Store. On the Demographics widget, DoD ID replaces the Social Security number. Eligibility and subscriber information are now included in the details view, and the federal HIE tab no longer displays when no federal HIE data is available. The CarePoint information portal houses an interactive map of community partner facilities that contribute patient data to JLV. Map users can filter the view to display DoD, VA, USCG, eHealth Exchange and/or CommonWell associated treatment facilities. Access to this dashboard requires DHA VPN connection. A new interface between the JLV and the Individual Longitudinal Exposure Record (ILER) enables the exchange of exposure data as part of the federal EHR, enhancing care for those potentially exposed. There is now an opportunity to drive more accurate exposure information into ILER, create better outcomes and a more holistic picture of the exposure.

DoD

138,158

DoD USER ACCESS

50,611

DoD ACTIVE USERS

984,714

DoD PATIENT SELECTS

VA

347,011

VA USER ACCESS

117,979

VA ACTIVE USERS

5,892,436

VA PATIENT SELECTS

*As of September 2022**

SUPPORT TO DEPLOYED FORCES

Operational Medicine Health Care Delivery

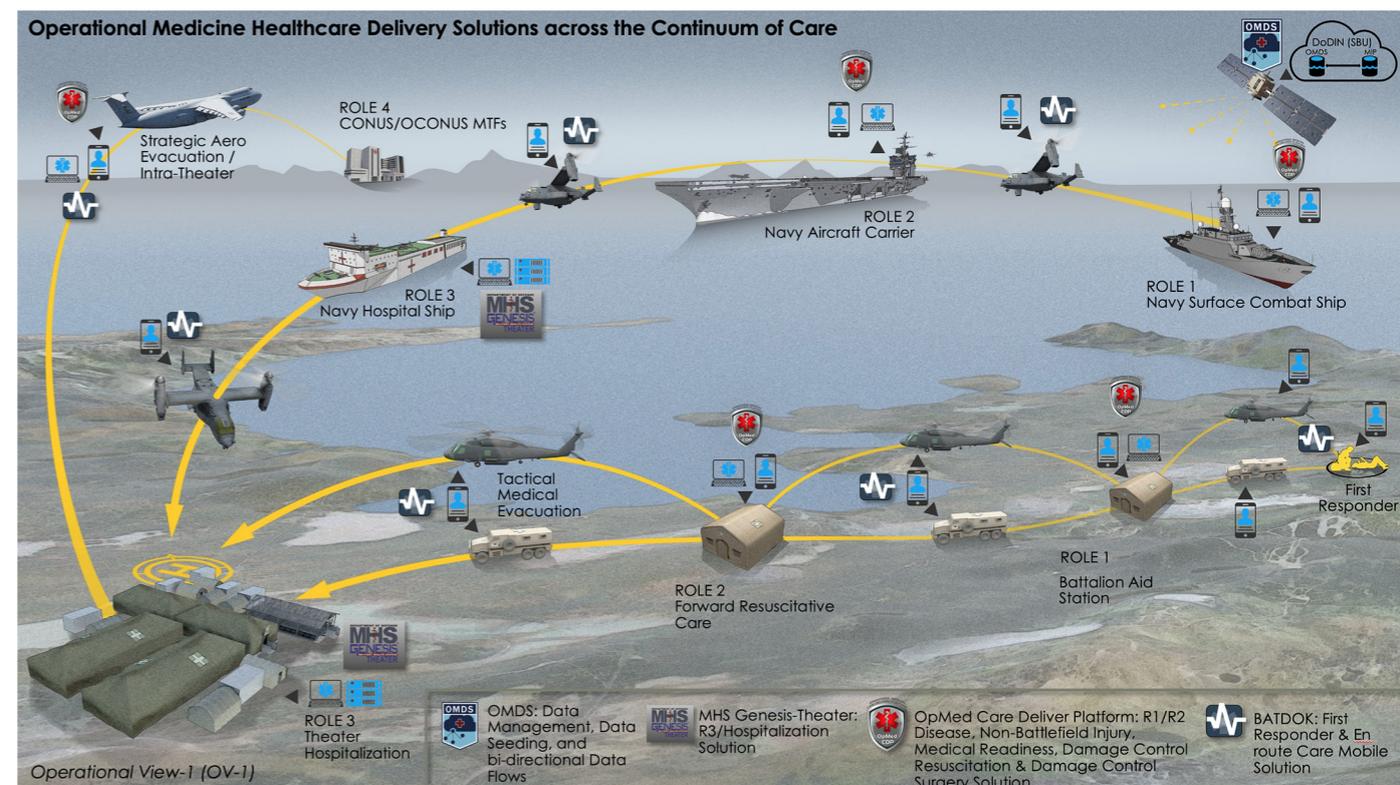
JOMIS develops modernized health care delivery (HCD) EHR solutions designed to meet the needs of users at the various OpMed environments. JOMIS works with the OpMed stakeholder community to connect systems and data across the Operational Medicine (OpMed) landscape and drive to support the longitudinal health record for service members.

PEO DHMS and the OpMed Functional Champion approved the selection of a hybrid solution using both commercial off-the-shelf (COTS) and Government off-the-shelf HCD products across the OpMed continuum of care.

BATDOK, or Battlefield Assisted Trauma Distributed Observation Kit, is an Android mobile device application that provides point of injury/illness documentation for first responders and tactical and strategic en route care. The selected COTS solutions provided by ViMed® and T6®, form the basis of Operational Medicine Care Delivery Platform (OpMed CDP), providing the core functionality at Role 1 (first responder) and Role 2 (forward resuscitative care), enabling Disease Non-Battlefield Injury documentation, Damage Control Resuscitation, Damage Control Surgery and Medical Readiness Documentation.

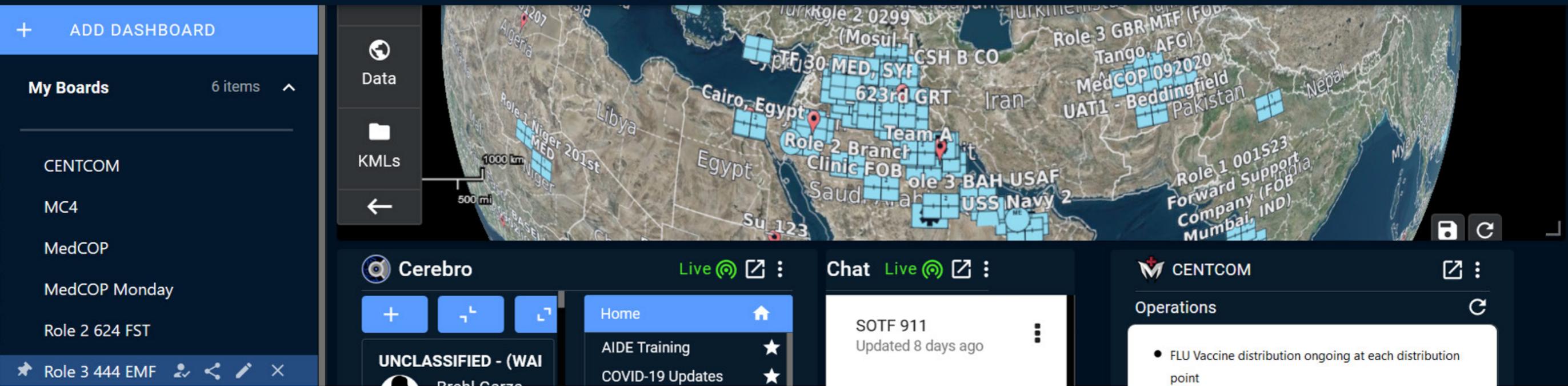
The MHS GENESIS-Theater (MHSG-T) software solution delivered as a black-box hardware appliance, called Theater-EHR-in-a-Box (T-EHRiB), will support Role 3 theater hospitalization, essentially all hospital capabilities except rehabilitative care. The method of delivering the T-EHRiB appliance (hosting MHSG-T) is a change from the original approach of delivering a software "gold disk" for install on existing service hardware: Gold Disk helps identify and mitigate security holes. The JOMIS HCD Role 3 team worked with the services to review the functional and technical approach and implemented iterative and transparent management of the solutions to increase stakeholder buy-in and awareness.

Delivering MHSG-T on the T-EHRiB appliance helps address many concerns expressed by stakeholders, including system administration burden on Role 3 sites. In addition to mitigating the concerns engendered by the software Gold Disk delivery approach, the T-EHRiB appliance enables MHSG-T to run on tactical edge devices and will lead the way for DEVSECOPS.



The JOMIS HCD Role 3 team continues to engage with the services to refine the product design. The JOMIS HCD Role 3 team also evaluates data movement requirements. The JOMIS Role 3 team and vendor work closely with the JOMIS Operational Medicine Data Service (OMDS) team to define OMDS interface requirements. The Role 3 team also works with service informatics representatives to validate required data for data seeding to provide to the JOMIS OMDS team in support of their data seeding analysis.

During the HCD Role 1, Role 2, en route care Minimum Viable Product (MVP) summit, stakeholders defined nine MVPs to support the various use cases across the deployed continuum of care and identified gaps in current solutions included in the initial design of the OpMed Care Delivery Platform.



The Medical Common Operating Picture (MedCOP)

MedCOP is a joint interactive system that provides leaders advanced decision support tools, real-time health surveillance and medical operations visibility, thus enabling them to manage enterprise-wide health services that support the full range of military operations. It aggregates data from a variety of sources, providing leaders with visibility about information, such as available beds, equipment and supplies at each reporting site. MedCOP is intuitive and customizable so commanders can receive the real-time information they need, which is tailored to their specific operations.

MedCOP expands on the capability set that Medical Situational Awareness in the Theater previously provided and resides on an operating platform called the Automated Information Discovery Environment. Its architecture is built to globally replicate enabling systems, sharing theater data in a timely manner to the OpMed Community.

The COVID-19 pandemic highlighted the need for greater visibility of deployed OpMed capabilities. OpMed commanders required access to all available tools to combat the pandemic.

JOMIS deployed the tactical and operational Patient Movement Application under guidance of Joint Trauma Systems and a theater blood reporting capability into the MedCOP dashboard. This provided tactical and strategic OpMed leadership with advanced decision support tools, including real-time health surveillance and medical operations visibility. The Disease Non-Battle Injury and Battle Casualty tracking module for symptomatic and syndromic surveillance deployed in 2021, enabling enterprise-wide health services support through the full spectrum of military operations.

MedCOP's globally replicating architecture and interactive decision support platform provides available real-time information and data sharing capabilities, enabling decision makers the ability to leverage medical capabilities. MedCOP integrates with several authoritative source external systems, such as CarePoint, and streamlines the ingestion of CarePoint data, automating specific areas of the data flow, which previously required complete manual input.

Several combatant commands (CCMDs) now access enhanced OpMed capabilities, improved training and anchoring support services—boosting the user experience and increased adoption of MedCOP. CENTCOM was the first CCMD to fully adopt and mandate MedCOP as its system of record. AFRICOM followed thereafter, with a mandate to MedCOP being its primary system for medical command and control. JOMIS deployed MedCOP servers to DHHQ, EUCOM, AFRICOM and Joint Staff J7.

Operational Medicine Data Service: The Foundation to a Data-Centric Program

JOMIS provides decision makers, medical logisticians, planners and providers with joint operational medicine health information software solutions. JOMIS (along with PEO DHMS and the other component program offices of DHMS) connect data across the continuum of care, spanning domestic and international conditions, to enable caregivers the ability to provide the best care possible and provide senior leaders with the information to make tactical decisions based on available medical information.

OMDS provides critical data transport and management capabilities that are key to the JOMIS operational medicine modernization activities. OMDS is an extensible, scalable, technical infrastructure aligning with DoD's move toward data-centricity. The development of adaptive services gives JOMIS the flexibility to onboard new solutions in preparation for support to advanced data analytics (natural language processing, artificial intelligence and machine learning). OMDS scales according to demand, leveraging cloud-native services and toolsets.

OMDS serves as the data fabric, framework and service mesh connecting OpMed health care systems. OMDS supports the DoD data strategy and the national defense and digital modernization strategies of providing the overarching vision, focus areas, guiding principles, essential capabilities and goals necessary to transform into a data-centric enterprise. This is completed by providing data mesh solutions to enable the interoperability of OpMed capabilities to support the warfighter by brokering data to drive informed decisions across the operational medicine space.

An OMDS authority-to-operate (ATO-C) is targeted for late FY23, Q2, and operational use by the third quarter of FY23. OMDS will participate in the Health Care Delivery solution operational assessments and testing.



JOMIS' Theater Blood Program

The Theater Blood program, a FedHealthIT2021 Innovation awardee, supports the wartime missions of the Armed Services Blood Program to provide overall blood management services to U.S.-deployed personnel across the globe. This solution replaces the current legacy web-based application and creates a new theater system capable of performing highly synchronized and complex tasks to ensure the availability, continuous documentation and visibility of blood products (donor, inventory and transfusion) in DIL (disconnected, intermittent, low bandwidth) environments. Feedback from user acceptance events ensures the Theater Blood team delivers the utmost value to warfighters, which is crucial to improved blood operations across the enterprise. In the near term, the team engaged in a user-centered design methodology, with the ultimate goal of delivering life-saving blood solutions in support of U.S. warfighters.

Portfolio Management

In FY2022, the EIDS PMO completed wide-scale organizational restructuring, which emulated the health IT industry standard portfolio and product management. This product delivery model effectively supports customers, consumers of data and enables clinicians to leverage data and provide the best care possible. The agile development framework improves the ability to rapidly deliver new and innovative products based on customer demand and enterprise needs. EIDS revived many standard project and product templates, conducted leadership training on agile practices and instituted a Process Improvement Council to drive continuous improvement.



Operation Helios

Operation Helios completed milestones in FY2022, including successful migration of MHS Mart (M2) data warehouse migration to GovCloud in July 2022. The 2,500 plus end-users from Defense Information Systems Agency or DISA Capacity Service were working in the GovCloud environment by September 15.

As the MHS Data Repository (MDR) migration nears its final stages, the team will continue to ensure record processing meets the highest standards in timely delivery and quality of data. Operation Helios is expected to complete its last major milestone in January 2023: The migration of MDR into the MHS Information Platform (MIP) ecosystem.

Evolving with MHS GENESIS, the EIDS Bulk Data Extract (BDE) 3.0 project continues to make headway, improving from the older BDE 2.4.

EIDS BDE 3.0 improved daily extraction, load and transfer of data from MHS GENESIS that provided critical clinical data to users from real-time events within 36 hours (previously two to three weeks). As of September 22, 2022, MHS GENESIS BDE 3.0 views available in the GovCloud include 300 tables of data (encounters, orders, appointments and scheduling), dramatically increasing MIP analytic capabilities.

Work continues on tables requested for added capabilities, historical changes in data capture and incorporation of legacy data within the MIP to provide a lookback to the beginning of care recorded in MHS GENESIS. The project is expected to be completed in FY2023.



Software Factory

Traditionally, software is developed on local resources and manually moved between environments. However, the dynamics of software development in a federal environment challenges speed-to-market and operational efficiency. The EIDS Software Factory Team collaborates with DHA, creating an automated build path option to modernize EIDS applications that utilize automated security scanning, testing and containerization or standardized software development work for back-end developers.

The Software Factory enables cutting-edge innovation to manage infrastructure and application code deployments. The Software Factory uses infrastructure as code, artificial intelligence/machine learning capabilities and continuous ATO. Like with all class-leading innovation, substantial transformation must be infused with the essential human element. New ways of thinking and cultural change always require communication and collaboration between technical and business components to achieve success. The Software Factory tools underpin a common development platform essential to future development and rationalization efforts within the MHS.

The EIDS Software Factory team works closely with DHA leadership, cyber, infrastructure and development teams to realize the benefits of these changes. The unified goal is sensing and responding to market conditions with high quality, relevant software, underlying virtual infrastructure and radical visibility.

In FY22, the Software Factory created a sustainable and reusable coding development infrastructure, with economies of scale that will make it easier for technical employees.

MHS Information Platform-Immunization Tracking & Reporting

On May 26, 2022, the MHS Information Platform-Immunization Tracking & Reporting (MIP-ITR) took over immunization data broker functions from Defense Enrollment Eligibility Reporting System (DEERSi) as the single source of truth for DoD immunization records. It provides a near real-time flow of immunization data between EHRs and service medical readiness systems and integrates commercial pharmacy data transaction service records, providing a comprehensive view of vaccination status for force health and readiness. MIP-ITR provides a self-service business intelligence tool that users can query for trusted data to report and build custom dashboards. The on-schedule MIP-ITR implementation saves DoD approximately \$1.5 million a year in DEERSi sustainment costs.

MIP-ITR's invaluable benefits and insurmountable impact on military health include integrating and standardizing all immunization tracking and clinical system data for a reliable, robust view of immunization records, creating a single source of truth for authoritative immunization records and enabling enterprise-level reports and analytical insights. This aggregation of data will be used for performance, health care evaluation and research. MIP-ITR completes National Defense Authorization Act Section 716: Establishment of a DoD system to track and record information on vaccine administration.

COVID-19 Vaccine Reporting Evolves to Pandemic Response & Reporting Analytics

In FY22, the COVID-19 Vaccine Reporting became the EIDS Pandemic Response & Reporting Analytics (PRRA 2022) team. The PRRA team reports to the Centers for Disease Control and Prevention (CDC) Immunization Data Clearing House and provides COVID-19 tracking data to DoD, CDC and White House leadership.

The PRRA team processes over 10 million COVID-19 vaccination records daily, and improves the quality of race and ethnicity data within COVID-19 analytics for the CDC.

The PRRA team collaborated with the Population Risk Assessment Tool (PRAT) team to implement national clinical best practice guidelines for COVID-19 analytics, specifically, Modeling of Immunization Registry Operations Workgroup (MIROW) and Advisory Committee on Immunization Practices (ACIP) COVID-19 recommendations. Implementation of MIROW and ACIP recommendations improved the ability to accurately identify dose one, dose two, additional dose and booster doses within COVID-19 vaccine data.

The services collaborated with the PRRA and PRAT teams to decrease the reporting delta of fully vaccinated (COVID-19) personnel between their service reporting systems and ADVANA, DoD's big data platform for advanced analytics. For example, the Air Force reduced the reporting delta from 8.1% to 0.4% between the Aeromedical Services Information Management System and ADVANA, and the Army reduced the reporting delta from 23.81% to -0.39% between Medical Protection System and ADVANA.



Legacy Data Consolidation Solution

Legacy Data Consolidation Solution (LDCS) within the MIP adds capabilities to identify, capture, organize, disseminate and synthesize required legacy data. Legacy data supports business intelligence, continuity of care and proper archival of deployment, legacy system decommissioning, operations and sustainment activities. The LCDS front-end user interface is called the Health Information Archive (HIA), which identifies, captures, organizes, disseminates and synthesizes data from legacy systems.

The full list of legacy systems in the initial scope of HIA include: Composite Health Care System (CHCS)/Cache, Armed Forces Health Longitudinal Technology Application (AHLTA)-Clinical Data Repository, Clinical Information System/Essentris, Surgical Scheduling System, Anesthesia Reporting Monitoring Device and Enterprise Blood Management System-Transfusion (EBMS-T).

The HIA initial operational capability went live July 2022, allowing the MHS to decommission EBMS-T data and CHCS legacy data at Madigan (NH Oak Harbor and NH Bremerton), Fairchild AFB, Mountain Home and NH Lemoore.

In the future, HIA will incorporate multiple data ingestion pipelines that will in turn bring additional data sets from in-scope systems into the solution. This will result in further legacy decommissions and cost savings for DoD. HIA data will be available to end-users via a web-based application, and will integrate with external partners, including the Joint Longitudinal Viewer and MHS GENESIS.

EVENT SUPPORT

HIMSS 2022: Experiencing, Enhancing and Evolving the Federal EHR

Government leaders emphasized the benefits of a single, common federal EHR to patients and providers during a panel presentation at the HIMSS Global Health Conference and Exhibition held March 14-18, 2022 in Orlando, Florida.

Ms. Holly Joers, Program Executive Officer of PEO DHMS, spoke on a four-member panel about experiencing, enhancing and evolving the federal EHR. She proudly announced that DoD kicked-off its final Continental United States or CONUS Commanders' Workshop at Wright-Patterson. This marks the beginning of preparation for the last wave CONUS deployment in 2023. Momentum continues to build with each wave deployment, and at the time of the panel discussion, Waves HOOD and BRAGG were only three days away from going live on March 19, 2022.

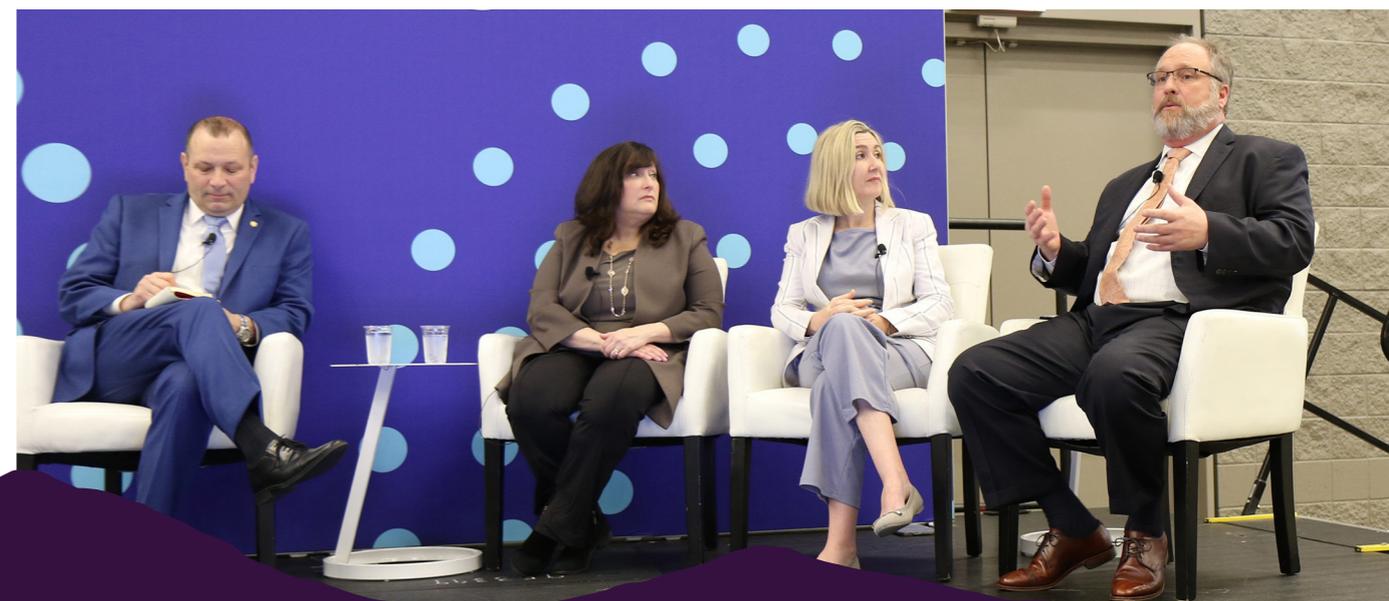
“In order to transform how we coordinate care, we must leverage local commander support,” explained Joers. “It really does take a village. Our commander leadership is the secret sauce that makes MHS GENESIS rollouts a success. We are implementing WITH them, not FOR them or TO them. They are the change leaders.”

The MHS GENESIS record evolves with each wave deployment as workflows optimize to support unique clinical capabilities. These advanced capabilities are implemented across the entire enterprise so national standards support future deployments and ensure consistency throughout the federal EHR.



In order to transform how we coordinate care, we must leverage local commander support. It really does take a village. Our commander leadership is the secret sauce that makes MHS GENESIS rollouts a success. We are implementing WITH them, not FOR them or TO them. They are the change leaders.

Ms. Holly Joers, PEO



Media Roundtable Highlights MHS GENESIS Successes

On June 21, 2022, 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 EHR.

Ms. Joers lauded the deployment of MHS GENESIS as it remains on schedule and on budget to deploy at all planned locations by the end of 2023. She added, “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 and 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.”

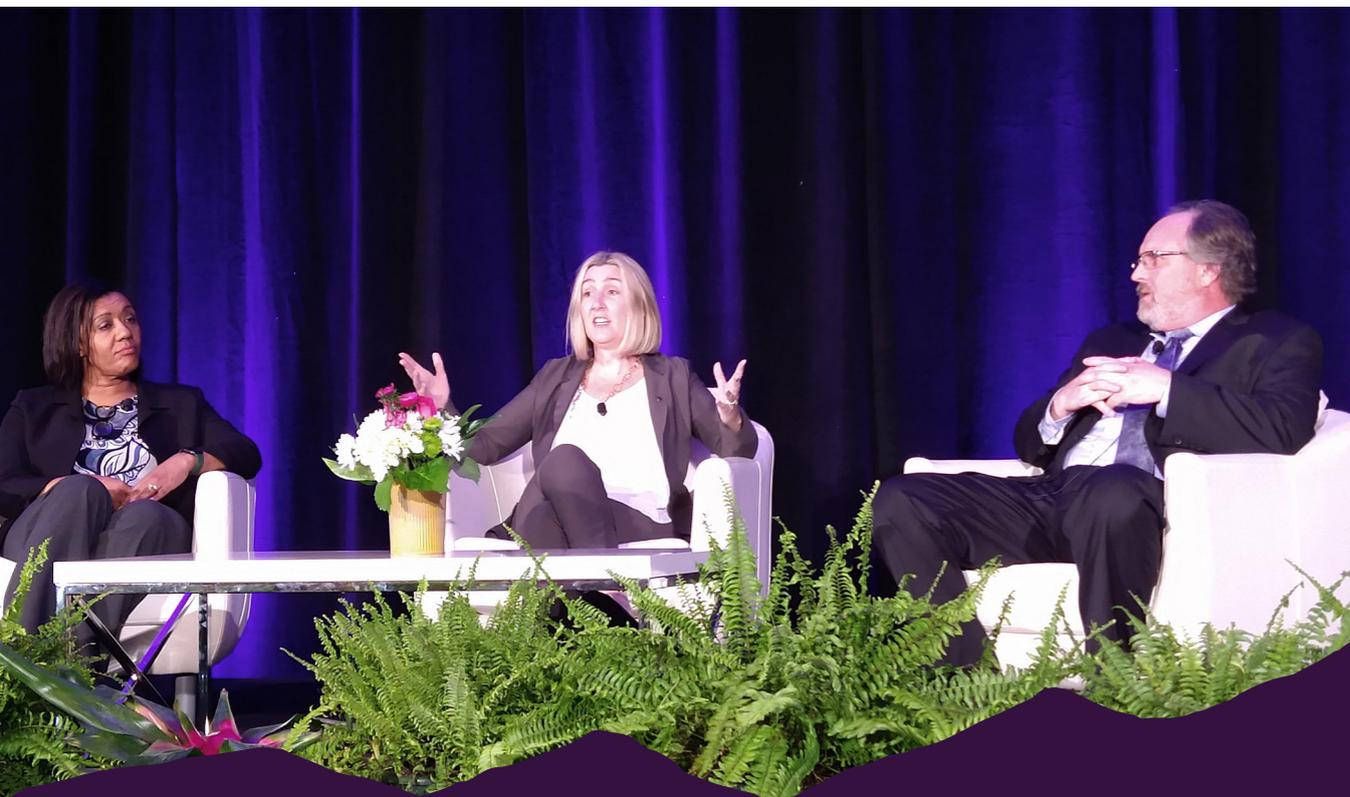
Maj. Gen. Appenzeller explained the usefulness of MHS GENESIS from a provider’s perspective. “The electronic health record is an awesome system for helping us provide safe, standardized, effective patient care. I love the tools, and I love having the electronic health record,” he said. “I’m an emergency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

2022 DHITS Symposium

The 2022 Defense Health Information Technology Symposium (DHITS) kicked off on August 16 in Orlando, Florida. This year’s event, “Transforming Military Health Care Together,” synced very closely with PEO DHMS’ program mission to transform the delivery of health care and advance data sharing through a modernized EHR.

Ms. Holly Joers, PEO DHMS Program Executive Officer, spoke on a panel with Mr. Bill Tinston, FEHRM Director, and Dr. Leslie Sofocleous, Acting Executive Director for the VA EHR Integration Office, moderated by Mr. Chris Ruefer, PEO DHMS Deputy Program Executive Officer. They discussed the current state of MHS GENESIS deployment, interoperability between the DoD and VA and optimization of data management and workflows, among other topics. Leaders from PEO DHMS program offices hosted breakout sessions highlighting data management, operational medicine, cybersecurity, deployment and MHS governance.

The exhibit hall showcased several MHS GENESIS capabilities, including Coordinated Clinical Care, RevX, Mass Readiness/Mass Vaccination and MHS Video Connect. EIDS hosted a kiosk inside the MHS Pavilion illustrating its work with the MIP, and JOMIS demonstrated MedCOP, as well as its full suite of health care delivery solutions: ViMed®, T6® and BATDOK.





MHS GENESIS on Display at DHA Symposium

Nearly 600 MTF commanders, deputies, senior enlisted staff, including the service surgeons general, convened in Norfolk, Virginia from May 24–26, 2022 for the DHA Symposium, marking the first time the group met 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 to use the system with an over-the-shoulder peer expert.

A panel of leaders from PEO DHMS, VA, USCG and the FEHRM discussed the status of their deployments, lessons learned and items that excite them about the future during the closing plenary session. 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 Mr. 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.”



COLLABORATIVE SERVICES

METIC Hosts Events to Support EHR Systems Development & Acquisition

In FY22, PEO DHMS' Medical Enterprise Test Innovation Center (METIC) hosted development, test, integration, evaluation and demonstration events to support development and acquisition of the DoD's EHR systems. The METIC is a shared secure facility, fully managed by PEO DHMS. PEO DHMS provided facility management, requirements, stakeholder coordination, design services, data connections, cloud services, virtualization, cybersecurity, asset management, event planning and networking support for the events. The METIC is the physical component of the larger PEO DHMS solution for systems development and acquisition processes that enables improved solutions at the speed of relevancy.

METIC FY22 Event Highlights

JANUARY, FEBRUARY, APRIL-MAY 2022

EIDS/JDP25 contact tracing through wearables testing (JEON)

MARCH 2022

JOMIS HCD Role 1 and Role 2 vendor solution briefing
JOMIS HCD Role 3 MHS GENESIS-Theater technical design review
JOMIS HCD Role 3 MHS GENESIS-Theater clinical evaluation

JULY 2022

JOMIS HCD Role 1 and Role 2 prototype demonstration

CONTINUOUS

DHMSM MHS GENESIS software and medical device testing

AWARDS

2021 WashingtonExec Pinnacle Awards

Ms. Holly Joers: Executive of the Year
Mr. Richard Husk: Government Cloud Executive of the Year

2022 FedHealthIT Innovation Award

MHS Video Connect

DHA Competitive Achievement Awards

Mr. Chris Nichols
Advanced Professional Engagement and Exploration Award

Mr. Robin Russell
Advanced Professional Engagement and Exploration Award

Lt Col Peter Easter
Excellence in Leadership Award

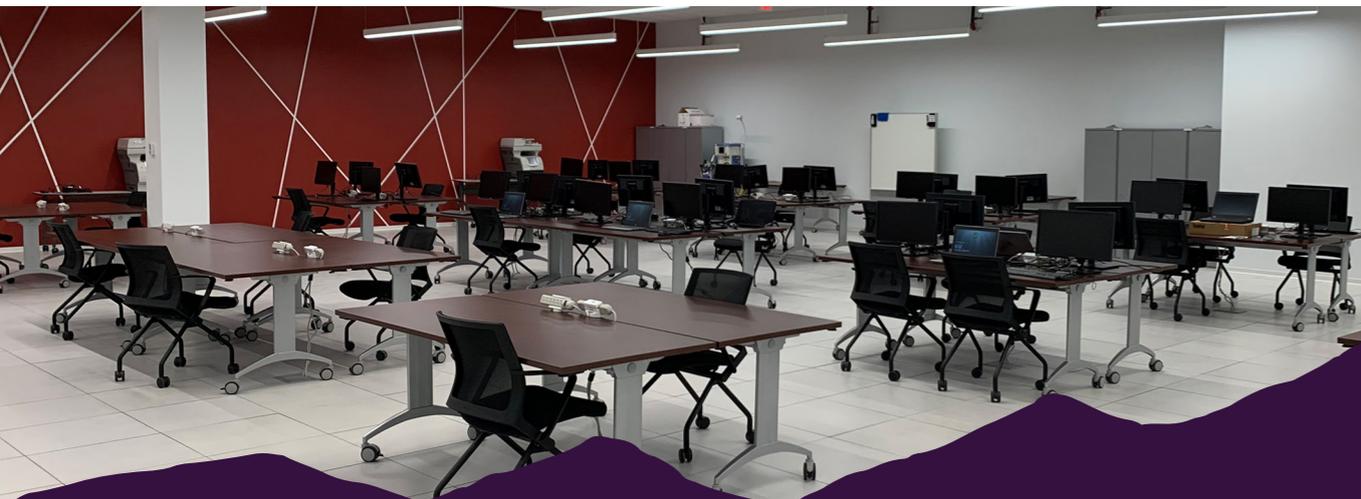
Mr. Ceasar Parazo
Innovative Award

Ms. Kathy Quivis
Good Steward Award

Major Russell Ramsey
People's Choice Award

Mr. Richard Trice
Excellence in Leadership Award

Mr. Sean Steffensen
Positive Spirit Award



LEADERSHIP

LEADERSHIP



Holly Joers
Program Executive Officer

As Program Executive Officer of PEO DHMS, Ms. Holly Joers oversees DoD health IT modernization including DoD's EHR as well as operational medicine, data exchange and interoperability initiatives.



Chris Ruefer
Deputy Program Executive Officer

As Deputy Program Executive Officer of PEO DHMS, Mr. Chris Ruefer supports the Program Executive Officer in oversight of DoD health IT modernization as well as PEO DHMS business operations.



David Norley
Program Manager, JOMIS

Mr. David Norley is the Program Manager for the JOMIS PMO. He directs the acquisition, development and deployment of modernized health IT capabilities to the deployed military community. He also oversees the sustainment and development of existing products in the Theater Medical Information Program-Joint portfolio.



Ken Slaughter
Program Manager, DHMSM

Mr. Ken Slaughter serves as Program Manager for the DHMSM PMO. In this role, he provides acquisition leadership and management expertise to support the deployment of the state-of-the-market electronic health record, MHS GENESIS.



Chris Nichols
Program Manager, EIDS

Mr. Chris Nichols serves as Program Manager for the EIDS PMO. In this role, he is responsible for delivering secondary data solutions, orchestrating integration with future state systems, such as MHS GENESIS, and providing enterprise clinical intelligence to include clinical support applications, readiness reporting, research, "big data" techniques and dashboards used for the entire MHS.

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Defense Healthcare Management Systems - DHMS

May 25 · 🌐

Chris Nichols discusses how EIDS manages [#MHSGENESIS](#) and its data at the [#DHA](#) Symposium in Norfolk, VA.



MOST LIKED LINKEDIN POST



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

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This morning, [Holly Joers](#), along with Bill Tinston, Dr. Terry Adirim and Pat Flanders discussed the health enhancements [#MHSGENESIS](#) brings for beneficiaries in a panel at [#HIMSS22](#). What we've accomplished and what we have in-store for the future were the focuses of the discussion, and we look forward to bringing you their conversation soon! [#HIMSS](#) [#DHA](#) [#FEHRM](#) [#MHS](#)



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Defense Healthcare Management Systems



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

ACRONYMS

AHLTA: Armed Forces Health Longitudinal Technology Application

BATDOK: Battlefield Assisted Trauma Distributed Observation Kit

ATO-C: Continuous authority to operate

CCMD: Combatant Command

CHCS: Composite Health Care System

COTS: Commercial Off-the-Shelf

DEERSi: Defense Enrollment Eligibility Reporting System

DevMAC: Development Multiple Award Contract

DHA: Defense Health Agency

DHMSM: DoD Healthcare Management Systems Modernization

DoD: Department of Defense

EBMS-T: Enterprise Blood Management System-Transfusion

EHR: Electronic Health Record

EIDS: Enterprise Intelligence and Data Solutions

ERC: En Route Care

FEHRM: Federal Electronic Health Record Modernization

FHCC: Federal Health Care Center

HCD: Health Care Delivery

HIA: Health Information Archive

HIE: Health Information Exchange

HIMSS: Healthcare Information and Management Systems Society

HIVE: Health Information Vision Exchange

ILER: Individual Longitudinal Exposure Record

IOC: Initial Operational Capability

JLV: Joint Longitudinal Viewer

JOMIS: Joint Operational Medicine Information Systems

M2: MHS Mart

MDR: MHS Data Repository

MedCOP: Medical Common Operating Picture

METIC: Medical Enterprise Test Innovation Center

MHS: Military Health System

MHSG-T: MHS GENESIS-Theater

MHS GENESIS: DoD Modernized Electronic Health Record

MIP: MHS Information Portal

MIP-ITR: MHS Information Portal-Immunization Tracking & Reporting

MTF: Military Treatment Facility

OPMED: Operational Medicine

PEO DHMS: Program Executive Office, Defense Healthcare Management Systems

PMO: Program Management Office

PRRA: Pandemic Response & Reporting Analytics

RevX: Revenue Cycle Expansion

T-EHRiB: Theater-EHR-in-a-Box

USCG: U.S. Coast Guard

USMEPCOM: United States Military Entrance Processing Command

VA: Department of Veterans Affairs