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Introduction

Section 715(f) of the National Defense Authorization Act for Fiscal Year 2020 (Public Law 116-92) amended Section 1635(h) of the Wounded Warrior Act (title XVI of P.L. 110-181), to require the Director of the Federal Electronic Health Record Modernization (FEHRM) office to submit a report on its activities during the preceding calendar year (CY). The enclosed report details the work of the FEHRM and the ongoing progress toward a single, common federal electronic health record (EHR) during CY 2023.

The FEHRM continues to collaborate with various federal agencies to advance their health care operations through the implementation of the Federal EHR. The Federal EHR enhances patient care and provider effectiveness, wherever care is provided. The Department of Defense (DOD), Department of Veterans Affairs (VA), Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), and Department of Homeland Security's U.S. Coast Guard (USCG) partner in the Federal EHR.

This partnership's interoperability effort to ensure the exchange and usability of data advanced significantly following the establishment of the FEHRM and with the Departments' insightful decision to embrace a single, common Federal EHR. Today, the partnership continues to expand with the addition of the Armed Forces Retirement Home (AFRH). This Department is implementing a Federal EHR that puts patients at the center, regardless of the location in which they initially received care.

This effort is vital. The Federal EHR, along with the joint health information exchange (HIE), significantly increases interoperability across DOD, VA, NOAA, USCG and other federal partners as well as participating provider organizations to enhance patient care and provider effectiveness. The separate, legacy EHR systems (including more than 130 different Veterans Health Information Systems and Technology Architecture [VistA] iterations within VA) are outdated and unable to create a seamless care experience as provided by the Federal EHR as they are not able to exchange and use data between each other; they are not interoperable.

Because the new Federal EHR is interoperable across Departments, it is truly longitudinal; from the time individuals join the military through their care as a Veteran, their care will be documented in one, complete patient health record that they and their providers can access. With the Departments using the same Federal EHR, they have access to the same patient data. As such, the FEHRM, DOD and VA are working toward interoperability between the Departments beyond simply the interoperability of data and toward the interoperability of processes.

The FEHRM determines ways to converge Federal EHR processes, workflows and configurations to streamline the patient and provider experience. While the Departments are all implementing the same single, common Federal EHR, each Department is given a certain

amount of flexibility to configure the Federal EHR differently to meet specific facilities' needs while still maintaining interoperability between the Departments.

Through established governance and change control processes, participating sites can each request configuration changes (e.g., add, edit or remove user roles, workflows and other configuration items such as interfaces, forms, assessments and scales) as long as these changes do not undermine interoperability between the Departments. Approved changes are implemented within the Federal EHR, and any Departments using the EHR have access to these changes. However, the FEHRM focuses primarily on determining ways to converge EHR configurations to streamline the patient and provider experience between the Departments. The goal is to ensure providers have a common user experience defined by evidence-based best practices and patients have a consistent care experience regardless of where they receive care.

The FEHRM is a key driver of this federal health care interoperability effort. In addition to its DOD, VA, NOAA, USCG and expanding federal agency partners, the FEHRM collaborates with the Department of Health and Human Services, Office of the National Coordinator for Health Information Technology (ONC) and other government and industry leaders. This collaboration improves the continuity of care among and between public and private-sector providers, better shapes the future of health information technology and information exchange and enhances the beneficiary experience.

The FEHRM unifies efforts across the Federal EHR ecosystem and delivers common capabilities such as managing the Federal Enclave; overseeing Federal EHR configuration and content changes; providing software updates and solutions; tracking joint risks, issues, opportunities and lessons learned; maintaining an integrated master schedule; leading analysis and integration of deployment activities at joint sharing sites (JSSs); advancing interoperability by expanding federal partner participants and managing the joint HIE; and driving registry modernization to enhance data usability.

Additionally, the FEHRM, DOD, VA NOAA, and USCG continuously collect feedback and lessons learned from those deploying and using the Federal EHR. This feedback informs best practices for future deployments of the Federal EHR as well as enhancements to the Federal EHR and interoperability.

Enhancements to the Federal EHR are ongoing. Some enhancements broadened interoperability to include additional provider organizations and data sources, and some helped to make the data within the EHR easier to access and use. Some enhancements integrated into the Federal EHR since initial deployment include Immunization Forecaster and Immunization Gateway; Telehealth Capabilities; Mass Vaccination Module; Bar Code Medication Administration; Opioid Registry; Burn Unit PowerForm; Joint HIE, a secure gateway used to connect to participating provider organizations across the United States who agree to securely share clinical information with our federal partners; and HealtheIntent, a joint solution providing analytics capabilities and recommendations to providers based on VA and DOD data. The FEHRM also drives registry modernization across the Federal Enclave including HealtheRegistries, a technology to track, manage and provide measures for improved health outcomes across beneficiary populations through integrated workflow recommendations called Health Maintenance Reminders. The FEHRM also works to identify exposure concepts (substances, events, and locations) frequently tracked in the Individual Longitudinal Exposure Record (ILER) but unavailable in Systemitized Nomenclature of Medicine – Clinical Terms (SNOMED-CT).

The FEHRM also oversees innovative initiatives to enhance data usability including Immunization Query that reports and queries immunization data in real time to and from local and state information systems; Seamless Exchange that allows clinicians to view, reconcile and import data from external records, creating a comprehensive, long-term record from trusted data sources; Prescription Drug Monitoring Program that integrates data from prescription drug monitoring programs, improving provider workflows and access; and Natural Language Processing that improves the ability of clinical staff to find targeted private sector data.

The Federal EHR continues to evolve as experiences with the Federal EHR drive lessons learned, best practices and enhancements. The FEHRM, DOD and VA are committed to synchronously deploying the Federal EHR at the Captain James A. Lovell Federal Health Care Center (Lovell FHCC), a site where staff and facilities are shared between DOD and VA, delivering care to Service members, Veterans and their families. This deployment will lead the way for how two health care systems can work together to make the best care decisions without technology being a barrier. The FEHRM will converge configurations, integrate processes and harmonize workflows between DOD and VA as part of deploying the Federal EHR at Lovell FHCC. This work will evolve the Federal EHR to better serve providers and patients at both Departments and enhance interoperability. These enhancements will provide the foundation for future JSSs and benefit the overall Federal Enclave.

Additionally, the amount of participating provider organizations DOD, VA, NOAA, and USCG share data with via the joint HIE is rapidly expanding. In August 2023, FEHRM expanded the joint HIE to include participation in Carequality, a framework enabling health data sharing between and among networks. Participating in Carequality expands the joint HIE connection from 75% of U.S. hospitals to more than 90% of U.S. hospitals – enhancing the ability to exchange patient data and resulting in more informed care for patients navigating between different health care providers. With a vision for federal organizations to share a single, common Federal EHR and meaningfully exchange and use data with participating provider organizations, patients will benefit from a continuity of care that spans across health care systems.

The collective EHR effort continues to improve and expand. As of January 2024, there are more than 194,000 DOD, VA, USCG and NOAA Federal EHR users—such as doctors and nurses—at 135 parent military treatment facilities, five VA medical centers, 109 USCG sites and seven NOAA sites. More than 9.5 million unique patients are in the Federal EHR system.

The Federal EHR saves providers time and enables more standard workflows to support enhanced clinical decision-making and patient safety.

FEHRM Activities Toward Implementing a Single, Common Federal EHR

The FEHRM Role in the Federal EHR Space

The FEHRM delivers common capabilities in support of the shared mission of DOD, VA, NOAA, USCG, and other partners to deploy a single, common Federal EHR. These common capabilities refer to the common solutions, tools and activities DOD, VA, NOAA, and USCG identify as needed for them to effectively deploy the Federal EHR. In the Federal EHR space, the FEHRM leads common capabilities, while the DOD, VA, NOAA, and USCG lead Federal EHR deployments.

The common capabilities the FEHRM delivers include:

- Governing and overseeing the Federal Enclave, a shared environment to contain the Federal EHR and supporting systems.
- Governing and overseeing the joint HIE, a data-sharing capability.
- Advancing interoperability, the meaningful use and exchange of data, to improve the continuity of care among and between public- and private-sector providers.
- Overseeing configuration and content changes to the EHR that are agreed on by the Departments through a joint decision-making process facilitated by the FEHRM.
- Tracking and facilitating software upgrades and solutions to optimize EHR performance.
- Tracking joint risks, issues and opportunities as well as lessons learned regarding EHR implementation to inform continuous improvement.
- Maintaining an integrated master schedule to help coordinate EHR activities.
- Developing and updating deployment maps to show real-time status of deployments.
- Leading analysis and integration of deployment activities at JSSs, sites where resources are shared between DOD and VA.

Value-added Activities Supporting EHR Modernization

Throughout CY2023 the FEHRM conducted a host of value-added activities in support of Federal EHR deployment. These activities include:

- Supported the following Federal EHR go-lives:
 - Wave Wright-Patterson went live on June 3, 2023. The wave included 7 medical treatment facilities (MTFs).
 - Wave Walter Reed/Ft. Belvoir went live on March 25, 2023. The wave included military hospitals and clinics in the National Capital Region.
 - Wave Drum/Portsmouth went live on January 21, 2023. The wave included 10 more parent MTFs across six states.

- Performed risk assessment, analysis and mitigation of asynchronous deployments across JSSs to support continued interagency clinical service sharing, including supporting three sites impacted for Wave Drum/Portsmouth, one site for Wave Walter Reed/Ft. Belvoir and three sites for Wave Wright-Patterson.
- Steered the execution of DHA, VHA and FEHRM agreed upon course of action for Enterprise Requirements Adjudication (ERA) at Lovell FHCC. ERA topics the FEHRM assisted on execution for FY2023 include: Referral Order Entry, Maternity Care Coordination, ED Pediatric Documentation, Clozapine, and Banner Bar.
- Completed a thorough review of the Honoring our PACT Act of 2022 (PACT Act) (Public Law 117-168) to identify high priority exposure related hazards. Established a team dedicated to researching missing exposure terms and submitting concepts for potential inclusion in SNOMED-CT. Special consideration was given to substances related to toxic burn pits, dioxins, jet fuels, and per-and polyfluoroalkyl sustances, and continued development of ILER and exposure-related interoperability
- Approved 1,035 Federal EHR content and configuration changes impacting the baseline.
- Registered 1,000 end users for the 2023 Federal EHR Annual Summit and gathered feedback, focusing on the efficacy and potential areas for enhancement within the Federal EHR system.
- Executed joint data management activities impacting the Federal Enclave, including establishing and chartering thirteen committees and one work group under the purview of the Data Governance Board and Analytics Governance Board to ensure full support of data standards, quality and sharing; analytics/reporting standards; and data warehouse access controls.
- Conducted and moderated meetings with patient and clinical satisfaction workgroups, focusing on the surveys implemented by the DOD, VA, USCG, and the FEHRM.
 Diligently analyzed the data accumulated through these initiatives and developed comprehensive longitudinal analyses of patient and clinician satisfaction survey responses, thereby elucidating key insights from the end users' perspectives.
- Supported NOAA joining the Federal EHR. Since June 2023, NOAA has successfully implemented MHS GENESIS into four NOAA medical programs (Aerospace Medicine, Dive Medicine, Marine Medicine, and NOAA Commissioned Corps Medical Affairs).
- Aligned and transitioned to a single governance platform tool for issue resolution, deployment and sustainment activities Lifecycle Management Tool (LMT JAZZ). The tool is now leveraged for Data Management, the Joint Sustainment and Adoption Board, the Federal Configuration Control Board and all FEHRM-chartered boards for comprehensive decision tracking and oversight. Joint issues and work items are fully tracked from intake through resolution.

Interoperability Progress and Accomplishments

The FEHRM continues to pursue the highest level of interoperability—the meaningful use and exchange of data—for the delivery of health care. The FEHRM's partnerships with DOD, VA,

USCG, NOAA and the private sector advanced interoperability significantly. Under the FEHRM's leadership and guidance, the Departments and the private sector made significant progress in interoperability. The following are examples of interoperability advancements during CY2023.

Joint HIE

Since the deployment of the joint HIE in April 2020, the FEHRM has continued to maintain and enhance the bi-directional exchange of Service member, Veteran, and other beneficiary health care data securely with participating provider organizations for purposes of treatment. The joint HIE has maintained access to eHealth Exchange and CommonWell and implemented its connection to Carequality in CY2023 allowing patient exchange with over 4,000 facilities.

The connections to multiple networks and continued onboarding of new HIE partners allows the joint HIE to deliver and retrieve millions of documents. In CY2023, the joint HIE has also completed optimization updates to reduce unnecessary transactions up to 17% for patient retrieves and a 54% reduction in transaction execution times for joint HIE patient retrieves resulting in less load on Defense Enrollment Eligibility Reporting System (DEERS) and reduced wait times between internal DOD systems. The FEHRM is engaged in future efforts such as enhancing and making a geographical map representation of all joint HIE partners/ connections (i.e., Joint HIE Interoperability Map) more accessible and streamlining the onboarding process for eHealth Exchange partners to ensure the joint HIE can exchange with new HIEs/partners quickly and efficiently.

Immunization Exchange with State Immunization Information Systems (IIS)

After the initial VA implementation of immunization exchange in Washington State, followed by subsequent implementations of this capability in Idaho, Montana, and Ohio, the VA and DOD opted to utilize immunization exchange via the Centers for Disease Control and Prevention (CDC) Immunization (IZ) Gateway in order to streamline and replace multiple point-to-point connections.

The immunization exchange via the CDC IZ Gateway enables the DOD and VA to report and query for immunization data in real time, to and from state IIS. Utilizing the CDC IZ Gateway eliminated the need for individual agreements with each state IIS by leveraging the Provider Jurisdiction Agreement and legal/policy coordination across state IIS with consolidated implementation guide and endpoint vs point-to-point connections to enable easier integration with each state IIS. This capability also allows DOD and VA to comply with state laws that require immunization providers to report to the state IIS.

In CY2023, the DOD deployed in Washington, Oklahoma, California, Florida, and North Carolina. The DOD and VA continue to incrementally grow the immunization exchange connections. DOD is preparing to implement connections to four additional states, while VA is coordinating implementation for Illinois and Wisconsin.

Seamless Exchange

Seamless Exchange is an interoperability tool that aggregates, deduplicates, and normalizes data from various sources into a comprehensive view of patient information within the clinician's workflow. In CY2023, the VA piloted Seamless Exchange at the La Grande Clinic within the Walla Walla VA system. The implementation was well received by VA stakeholders and expansion of the Seamless Exchange functionality at Walla Walla is planned followed by an enterprise-wide deployment during FY2024. The FEHRM is focused on expanding Seamless Exchange across the enterprise.

HealtheIntent

In CY2023, the FEHRM reached multiple, major milestones within the HealtheIntent platform that have, and will continue, to enhance its capabilities across the Federal EHR. The FEHRM completed an organizational build to extend the HealtheRegistries solution across the Military Health System (MHS) expanding the user base. The FEHRM guided the Resolution (RES) Millennium Page (MPage) upgrade which enhanced the HealtheRegistries performance and implemented new measures. In addition, the FEHRM led a key effort on behalf of the USCG that added a new Federal Tenant Identity Provider (i.e., Microsoft Azure AD) authentication option for more feasible access to data warehousing and custom enterprise reporting applications daily use.

In conjunction with Program Management Office (PMO) Technical Directors, the FEHRM was able to establish an initial Cloud migration model to move HealtheIntent Platform into the Oracle Cloud Infrastructure data center to continue application performance effort improvements.

The FEHRM Data Exchange Team continued to lead the HealtheIntent Data Upload Utility (HIDUU) data ingestion effort into HealtheIntent, an effort that contributed to improvements in population health outcomes. As an example, Colonoscopies for the last 10 years and mammograms for the last 5 years have been ingested from the legacy data lake in the Enterprise Intelligence & Data Solutions (EIDS) manage Military Health Systems Information Platform (MIP) into HealtheIntent. Planned updates for earlyFY2024 include ingesting lab results for the last two years followed by purchased care data in the future.

New HealtheAnalytics reports and HealtheRegistries measures continue to be configured to enhance the quality of care. The FEHRM will remain engaged on the furtherance of this significant capacity, and the delivery of other platform upgrades to meet the increased demand.

Longitudinal Natural Language Processing

In January 2023, the FEHRM successfully deployed Longitudinal Natural Language Processing (LNLP) into production. The initial LNLP capability focused on making it simpler for clinicians to pinpoint relevant information within large quantities of private sector notes which are often vaguely titled and sometimes have minimal value. The FEHRM subsequently partnered with the Military Entrance Processing Command (MEPCOM) to deliver a dedicated "single-click" data query feature that applies LNLP processing against a military candidate's community partner and private sector data for over 1000 potentially disqualifying conditions. That LNLP release, deployed in July 2023, reduces MEPCOM case review times for up to 70% of the 200,000 annual prescreened candidates whose records have joint HIE community partner data. The FEHRM delivered an additional LNLP release in October 2023 that built upon the existing capability by returning combined results across all documents. That release further refined the MEPCOM query feature that was delivered in July.

Due to the success of the initial LNLP deliveries, MEPCOM asked the FEHRM to build a dedicated widget within the Joint Longitudinal Viewer (JLV) that will apply LNLP processing of over 1000 potentially disqualifying conditions against three additional data sources and notes, including Armed Forces Health Longitudinal Technology Application (AHLTA) (legacy), Essentris (legacy inpatient) and MHS GENESIS. The FEHRM expects to deliver this capability in early 2024.

JSSs Implementation Support

Throughout CY2023, the FEHRM continued its efforts in the planning, examination, and implementation of activities to support the identified distinct clinical, operational, and business needs of targeted joint sharing sites impacted by six DOD waves; Wave PORTSMOUTH/DRUM, Wave WALTER REED/BELVOIR, Wave WRIGHT PATTERSON, and Wave GUAM.

As was observed in previous DOD Federal EHR deployment waves impacting JSSs, the FEHRM JSS team acknowledged the known practice of sharing personnel, space, and services at several of these JSSs. The FEHRM actively worked with its interagency partners and other stakeholders to identify any clinical, operational, business, and technical risks as an outcome of the DOD deployment of Federal EHR, develop mitigation steps and, as needed, provide up to twelve days of onsite support during the go-live period.

The FEHRM worked with its interagency partners (Defense Healthcare Management Systems (DHMS), EHRM-IO PMOs and DHA HI) and local JSS's stakeholders to ensure that the agreed upon interim solutions were implemented and ready for go-live. Additionally, the FEHRM JSS team members provided onsite support to deployment go-live activities.

The FEHRM, alongside its DHA (clinical and business) and VHA OHI partners, evaluated the nature of the shared clinical services at eight JSSs. The responses received helped the FEHRM and its partners to validate their understanding of the sharing relationship that exists between the sharing partners and to begin mapping out mitigation steps to address potential risks, if identified.

The FEHRM identified risks that would impact continuity of shared services delivery for several of these JSSs and developed mitigation strategies in coordination with DHA HI and the Joint Resource Services Assessment Office through active engagement with these joint sharing facilities and DOD/VA EHRM PMOs.

JSS Lovell FHCC Legacy Operations

As defined in the DHMS Program Executive Office Transition Agreement (TA) dated December 5, 2022, the FEHRM assumed responsibility for joint HIE, JLV and Lovell FHCC legacy system sustainment. The joint HIE, JLV and Lovell FHCC capabilities funding requirements remain tied to EIDS Program Element (PE) within PEO DHMS.

JSS FHCC Legacy Operations is a component of the overall JSSI Workstream support tenant and is responsible for the coordination and management of the Lovell FHCC Federal Health Legacy Application Interoperability Solutions, which includes the Enterprise Service Bus-Orders Portability (ESB-ORP), Medical Single Sign On-Context Management (MSSO-CM) and associated test and evaluation and cybersecurity activities in coordination with Lovell FHCC, DOD, VA and other key stakeholders. Below includes a description of each key accomplishment and Solution.

Medical Single Sign On – Context Management (MSSO-CM)

MSSO-CM handles information that is critical to the support of deployed and contingency forces. The MSSO-CM system allows users (authorized government, military and contractor personnel) to interoperate seamlessly and securely among clinical applications AHLTA, Composite Health Care System (CHCS), Veterans Health Information Systems and Technology Architecture (VistA) and Computerized Patient Record System (CPRS). The MSSO-CM program inherits the users from each system it interfaces with as well as the number and type of users defined by these interfaced systems. The Single Sign-On (SSO) component eliminates the need for health care providers to sign on each time they switch applications, thereby automating the user login process by using credentials stored in a secure database. It enables users to enter their credentials only once and access multiple applications.

The Context Management (CM) component synchronizes patient context data across multiple applications, eliminating the need for health care providers to duplicate patient searches from one application to other participating clinical applications.

Throughout CY2023, JSS Lovell FHCC Legacy Operations engaged in the testing and product verification of both MSSO and CM capabilities in both test and production environments. Key MSSO-CM accomplishments include the coordination of the Assured Compliance Assessment Solution (ACAS) scans with the Cyber Team as well as the completion of 25 Risk assessment activities for the Imprivate 4th Generation (G4) Appliance upgrade, the completion of the G4 Appliance upgrade in Development, Integration, and Production environments, the installation of CM Information Assurance Vulnerability Alert (IAVA) patches and Open Java Development Kit v20.0 and v21.0 update in Development, Integration, and Production environments, as well as the Microsoft Security Server IAVA patches, the AHLTA 3.3.9 CF 9.0 upgrade and the MEDCIN Code v22 Update

21.0 in Integration, and Development environments. The completion of Imprivata OneSign 23.2 Hot Fix 2 and Imprivata 2023-2-1 Quarterly Oracle patch update in Integration environment.

Enterprise Service Bus/Orders Portability (ESB/ORP)

ESB/ORP capabilities enable DOD and VHA clinicians to place orders and have those orders actionable and displayed within CHCS, AHLTA, VistA or the CPRS.

The FHCC Orders Portability interface provides Orders Portability enabling the DOD legacy systems to send and receive orders, status updates and results from the VA systems via an ESB for Laboratory, Radiology and Consults.

The JSS Lovell FHCC Legacy Operations Enterprise Service Bus (ESB) and Orders Portability (ORP) team recently completed testing and deployment of various functional enhancements into Production. These enhancements include an Auto Upload Clinical History feature that allows for an automatic population of clinical history in the Anatomic Pathology (AP) system. The Reconfigure Last Menstrual Period (LMP) field has been updated to allow for free text entry of LMP date for GYN orders, rather than just a date selection in the calendar. AP orders LabLion enhancement has been added to allow AP tests ordered on the DOD side to cross into LabLion. Previously, anything ordered in CHCS did not cross into LabLion, and the user was required to enter the data manually.

Other enhancements include adding Outpatient Appointing to Retry & End of Day reports, which allows the site to address Outpatient Appointment issues when appointments fail to cross and keep the patient's appointment in both systems. New AP tests in CPRS enhancement benefit the providers and the patient. Order sets are orders that will prompt the provider to order additional lab based on the patient's age or other conditions rather than leave it up to the provider or the person placing the orders to make that decision and keep the patient from having to return to the facility for another lab sample. The Removed Order free text enhancement makes it much easier to read the patient's results, which benefits both the patient and the ordering provider. The Terminology Manager UI Search enhancement benefits providers and users when performing Order Portability maintenance. The VistA Scheduling enhancement keeps the two systems in sync and clears up pending appointments on the DOD side.

Additionally, the ESB-ORP team assisted in testing the following ORP interface enhancements. The Lab Enhancement includes the laboratory address in the laboratory results message flow between CHCS and VA VistA. This site-specific package for Great Lakes is an identified requirement by the hospital's Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Development of the Proxy Location Solution for incoming traffic from the DOD has reduced negative operational impacts at the site. The team also added the Progress Notes to Retry feature for End of Day reports to capture transactions for acknowledgment and application error logged by receiving DOD or VA system. The performing lab Quest Diagnostics addresses the mismatch between DOD and VA by ensuring that the VistA Quest Diagnostics name matches the CHCS name. The Quest Diagnostics Duplicate Address Fix resolves the address duplication when the orders cross from DOD to VA.

The development of the Proxy Location Solution for incoming traffic from the DOD allows unmapped locations to be assigned a default value so that the receiving system can process the messages to completion. Capture the Proxy Location Name and Add a Free Text Comment feature allows the site to identify the actual hospital location when the proxy location is invoked. Registration and Eligibility Issue resolves the patient eligibility enrollment issue within Joint Patient Registry (JPR). Exception/Error Logging Capabilities and filter out PII Logging to ensure the end user's login credentials are not logged in the report. Check Batch files for "No-new-Recruits added" is an enhancement that allows the JPR Application to parse the Daily Batch File to check for "No-new-Recruits added" notification and display an appropriate message on the UI.

FHCC Federal EHR Implementation Support

The FEHRM leads the Lovell FHCC Federal EHR implementation, in collaboration with DHMSM and EHRM-IO Program Management Offices (PMOs). In support of the configuration and deployment of the Federal EHR at Lovell FHCC, the project team focused on both predeployment and deployment activities. The multi-agency Federal EHR Implementation team successfully conducted several key activities and milestones on the deployment schedule supporting activities necessary for site activation (e.g., schedule coordination and risk management), adoption (e.g., Change Management and Communications), training and support (e.g., User and Super User Training) and infrastructure and devices (e.g., hardware connection and validation).

The team supported development of the Implementation Plan Summary, delivered in February 2023, which provided a high-level overview of the implementation/deployment activities. During the report period, the implementation officially transitioned into the deployment phase with the FEHRM-coordinated Command Executive Brief (CEB), held with the site to kick-off the Lovell FHCC Federal EHR deployment. The Lovell FHCC EHR team also initiated the User Role Assignment (URA) process and the Communications Kickoff in the weeks following the CEB.

Most notably, the multi-agency implementation team completed the Lovell FHCC Enterprise Requirements Adjudication (ERA) Process in Q2 CY2023. In total, 69 ERA topics were identified for adjudication, and a total of 341 unique subject matter experts (SMEs) were identified by the Lovell FHCC Federal EHR implementation team and program offices to participate in 67 total ERA discussion sessions.

Throughout the FEHRM-facilitated process, all of the topics received a recommended course of action (COA) from the Departments' key stakeholders. The FEHRM prepared a final ERA summary report that was signed by the Lovell FHCC Implementation Managers from the FEHRM, DHMSM PMO and EHRM-IO, and distributed to the project stakeholders. To

conclude the ERA process, the FEHRM received concurrence on an Executive Decision Memo by ASD Health Affairs and VA USH that provided results of the ERA direction for FEHRM to move forward in coordination with DHMSM and EHRM-IO in a singular Federal EHR implementation effort scheduled for deployment.

The FEHRM completed establishment of 12 targeted working groups bringing together key stakeholders from various departments and organizations to decide upon and close on any items that require joint decisions as it relates to execution and implementation of the Federal EHR at Lovell FHCC. Accomplishments include support of the scheduling working group and the FEHRM led the effort to establish a planned deployment schedule. The FEHRM is managing and maintaining the Lovell FHCC schedule with inputs contributed by DHMSM PMO and EHRM-IO, including a process for update cadence and content adjudication. The FEHRM is also overseeing the management and tracking of risks, issues and opportunities related to the deployment.

Led by the FEHRM, the Lovell FHCC risk working group established a process for risk management and coordinates with other working group members to centralize, identify, track and mitigate risks. In addition to solutioning meetings supported via the working groups, the FEHRM continued to lead project planning and execution activities for the interagency Lovell FHCC EHR Implementation Project Team, including guiding weekly leadership and working-level meetings, outlining roles and responsibilities and coordinating other activities.

During Q2 CY2023, the FEHRM, in partnership with DHMSM PMO and EHRM-IO, coordinated the completion of multiple pre-deployment assessments, including the EHRM-IO Current State Review, the DHMSM PMO Current State Assessment and the DHMSM Pre-Deployment Questionnaire. Completion of these pre-deployment activities and their outputs led to an additional significant milestone, the receipt and distribution of the primary vendor's Implementation Plan Executive Summary for Lovell FHCC, which provided a detailed overview of the deployment activities for project stakeholders, including site leadership.

The FEHRM brought together senior leadership from PEO DHMS, EHRM-IO, DHA, VHA and VISN 12 to review the implementation milestones, identify any major impediments to meet the schedule and confirm the go-live date. The senior leaders provided concurrence on the March 2024 deployment date and reaffirmed their commitment to work together and continue to prioritize the Lovell FHCC EHR implementation within their respective organizations. Following the concurrence on the March 2024 deployment date, the FEHRM held the Lovell FHCC Federal EHR Implementation Summit to provide an overview of program milestones, outline deployment roles and responsibilities, address various functional and technical related questions, and review the VA reset improvement initiatives.

During Q3 CY2023, the FEHRM coordinated the continuation of the URA process and various communications activities. The FEHRM supported the initiation of several additional Site Activation activities, including over 200 Model System Review sessions designed to introduce key site personnel to the deployment approach, activities, and enterprise workflows. The multi-agency implementation team also initiated Adoption and Training-related activities, including the formal Adoption Launch Event Series, Super User Kickoff, 13 DISTRIBUTION STATEMENT A: Approved for public release. Distribution unlimited.

Training Kickoff Workshop, beginning of Training Curriculum Mapping and completion of the first Awareness Fair.

Throughout Q4 CY2023, the FEHRM and the Departments partnered in multiple Lovell FHCC Federal EHR activities. These activities included a mass readiness clinical walkthrough that demonstrated the enhanced capabilities of the Federal EHR; the effective partnering effort of Walter Reed Medical Center and Lovell FHCC leaders in the capturing of EHR deployment lessons learned and best practices; and activities to strengthen oversight for life cycle management of the critical interfaces slated to be implemented.

The FEHRM reviewed and compared computer-based training (CBT) for dual-hatted end users (DOD and VA Patient Care Locations) within six complementary roles that work for the DOD and VA at Lovell FHCC. The FEHRM provided DOD and VA recommendations on a test out for CBTs that were duplicate between the Departments. End users were able to test out of the 200-level CBTs if they successfully completed the DODs in-person led training equivalent. The goal of this proposal was to decrease time away from patient care duties while still ensuring proper training was received by end users.

The FEHRM supported solutions design and configuration, and delivered outcomes including onsite and virtual events to validate dual-role user solutions for functionality in DOD and VA environments; development of a draft Facility Sustainment Guide; consolidated risk repository to manage significant risks in coordination with the deployment schedule and development of several communications products, including Dual-Eligible Beneficiary and Benefits of the Federal EHR documents to support user adoption.

FHCC Technical Partner Integration

Federal Interfaces Team (FIT)

During CY2023, the FIT shifted focus from an Integrated Project Team for all interfaces to prioritizing efforts on the Critical Net New Interfaces which are required for deployment of the Federal EHR at Lovell FHCC. The team is focused on gaining a firm understanding of the status of all Critical Net New Interfaces, identifying areas where leadership should place additional attention, and providing detail on potential risks for FHCC Critical interface delays.

Additionally, the FIT has initiated the process of drafting simplified architecture diagrams as a visual representation of interfaces to serve as a resource for interface stakeholders to assess impact and risk related to interface deployment for FHCC.

While the focus for the FIT has been Critical Interfaces for FHCC deployment, the team has begun tracking interfaces overall in an effort to document and sort the various types of interfaces in the Federal EHR and identify potential opportunities for future development of a unified Interface Catalog.

Testing and Evaluation

During CY2023, under the direction of Joint Sharing Sites Workstream, the FEHRM CTO Test & Evaluation (T&E) team collaborated with EHRM IO, DHMSM, and LPH to successfully establish a bi-weekly T&E Sub-Workgroup to foster ongoing collaboration of joint testing. The main goal is to develop a holistic testing approach for current and future sessions. In CY2023, the Sub-Workgroup supported ongoing assessments and reviewed testing efforts for Lovell FHCC's federal implementation with the objective of making patient data visible between DOD and VA in a Federal EHR.

The T&E team identified key testing events crucial for go-live and focused on identification of critical path items that require testing. Additionally, the team reported test findings and identified risks to support early resolution of key issues with potential impact to FHCC golive. To mitigate the key issues, COAs were developed by the Operations and Sustainment (O&S) and T&E teams regarding pre- and post-go-live in-patient pharmacy and pharmacy medicine dispensing cabinet systems at Lovell FHCC, design decisions were coordinated on the in-patient pharmacy systems, and timing of solutions were assessed to determine feasibility of achieving desired COAs by the go-live deadline date of early March 2024.

The teams outlined post-go-live timelines and actions, including networking, cybersecurity, contracting, personnel, and other IT work required, to achieve outcomes desired by Lovell FHCC, EHRM-IO, and DHMSM. During Q2 FY2024, the Sub-Workgroup will continue to support comprehensive testing, collaboration, and strategic planning, thereby setting the stage for a successful Lovell FHCC Federal EHR go-live implementation and will continue to follow through with implementation of desired COA post-go-live.

FHCC Cybersecurity

The FHCC Cybersecurity team actively worked on enhancing collaboration among the VA, DOD, and external partners. In CY2023, the focus was on prioritizing the security impact analysis of critical new interfaces and effectively communicating related changes to stakeholders. This effort involved close coordination with cross-functional teams to assess the current system architecture for compatibility and integration requirements. The team also conducted a thorough review of interface control documents, analyzed necessary ports, protocols, and service management changes required to support the connection leading to approval and endorsement for the Joint Requirements Form (JRF) from both DOD and VA authorizing officials, and the establishment of firewalls for the Radiology Picture and Achieving and Communications System (PACS) connection to Enterprise Clinical Imaging Archive (ECIA).

Successful teamwork with FHCC stakeholders led to the review and update of interconnection security agreements (ISAs). The team addressed corrective actions by identifying and mitigating information security and privacy concerns. Additionally, FHCC Cyber negotiated delivery deadlines in partnership with the local site, VA, and DOD, ensuring that risks were appropriately limited within the organization to maintain a more robust cybersecurity posture.

Military Advisement Team

In CY2023, The Military Advisement Team (MAT) continued to focus on the deployment activities of the Federal EHR at the Captain James A. Lovell Federal Health Care Center (FHCC) North Chicago. While the MAT tracked overall deployment activities, the focus was on clinical challenges that could lead to smooth clinical adoption.

One of the key challenges identified was Access and Identity Management. Dual-Hat users who support both DOD and VA, and have both DOD and VA roles, will need to be provisioned for Cerner profiles in both the DOD and VA domains. The MAT was instrumental in identifying this issue and highlighting the possible risks.

Another key technical-focused activity developed to achieve successful clinical adoption was the integration validation event. All clinical and financial functions are validated to ensure that any end user will be able to successfully interact with the new technology beginning the first day of go-live in Q2 FY2024. The impact of the MAT on a successful clinical adoption is highlighted by these two key and other ongoing activities (e.g., end user device testing, ECIA documentation for radiology PACS, Microsoft Office 365 B2B deployment, etc.).

Operations and Sustainment

In CY2023, under the direction of the FEHRM Chief Technology Office, the O&S team assisted with finalization of the master interface list at Lovell FHCC. The team completed the PACS Visio block diagram for FHCC and effectively collaborated with key stakeholders from VA and DOD to validate the model. The diagram was used to facilitate meetings with key stakeholders to discuss establishment of the connection between Compass Router (VA West Campus) and ECIA (DOD East Campus).

The O&S team continued to monitor FHCC hardware delivery, deployment, and validation activities. In efforts to facilitate a joint sustainment framework, the team set up an Operations, Sustainment, and Support model for FEHRM Partners for future Joint Sites which involves Help Desk Incident Tracking, End User Devices Performance, and other Sustainment activities for successful future go-lives.

National Standards for Exposure Exchange

Dissemination and use of military service-related exposure information will require exchange of the information between IT systems. For this exchange to be efficient and effective, the structure and content of the information must be standardized. At present, there is no formal definition of an "exposure" data structure, and many of the attributes that describe an exposure are not standardized. The lack of standardization impairs the ability to exchange exposure information between IT systems—which then makes it difficult to implement clinical decision support for specific exposures and frustrates research efforts that require grouping of individuals with similar exposures. The FEHRM maintains efforts to advance the interoperability of exposure information and the incorporation of this information into the Federal EHR: The FEHRM worked to identify exposure concepts (substances, events, and locations) frequently tracked in ILER but unavailable in SNOMED-CT. The FEHRM researched missing concepts and identified academic citations to justify inclusion in SNOMED-CT. Following the successful submission of its first batch of exposure terms that were accepted for clinical use in September 2023, the FEHRM submitted a second batch of terms in November 2023 for potential inclusion in the March 2024 release. FEHRM will continue to develop SNOMED terms for submission, including exposure substances and events tracked in ILER, called out in legislation, and considered high visibility and high priority by the Departments.

The FEHRM is leading efforts to identify existing health data standards that could be enhanced to enable the standards-based exchange of exposure information. One effort is examining the Health Level Seven (HL7) Fast Healthcare Interoperability Resources (FHIR) resource known as "US Public Health Contact Information," which may serve as the data structure basis for exchange of exposure information. The FEHRM will continue to collaborate with the ONC and the Departments to advance these efforts for all federal partners involved in exposure-related clinical care and research.

The FEHRM also participates in the Toxic Exposure Research Working Group (TERWG). Section 501 of the SFC Heath Robinson Honoring our Promise to Address Comprehensive Toxics Act of 2022 established a TERWG. The FEHRM's Exposure Interoperability workstream is a member of this Working Group, contributing to the identification of collaborative research activities and resources and the development of a five-year strategic plan.

Interoperability Standards

Interoperability regulations, policies, standards, and technologies are vital to the exchange and interpretation of health data. Achieving the highest level of interoperability requires a coordinated effort between federal agencies, health care providers, and information technology vendors to implement interoperability standards and best practices so service members, Veterans, and their families are provided the best possible care. The FEHRM recognized the need to establish standards guidance to advance interoperability between the Federal EHR and legacy and community partner systems, so the FEHRM's Digital Health Standards workstream was established to influence the development and promote the awareness and adoption of standards.

To influence the development of interoperability standards, the FEHRM engaged with standards development organizations (SDO) and prioritized its focus on standards subject areas or domains aligned with the NDAA for FY2020 and stakeholder priorities, and participated in selected work groups (WG) to contribute expertise in the standards development process. Work group participation involved months of analysis and collaboration with leaders across government, health care providers, software developers and others to agree upon language that represents industry best practices. The FEHRM influenced the standards development process by keeping joint interoperability and Federal EHR requirements at the forefront of the discussion.

In addition to SDO work group participation, the FEHRM engaged with other federal agencies such as the ONC to influence interoperability regulation and policy development. The FEHRM not only reviewed and provided subject matter expertise feedback, but also coordinated reviews across multiple federal agencies and consolidated feedback representing one voice to accelerate the policy development process.

To promote the awareness and adoption of health interoperability, the FEHRM hosted and participated in multiple forums to share knowledge of interoperability standards, policies, and trends with stakeholders and provided guidance, as needed. Specifically, the FEHRM hosted the FEHRM Stakeholder meetings, HL7 Government Birds of a Feather meetings, and VA Interoperability Leadership Standards Work Group meetings.

The following examples demonstrate some of the FEHRM's interoperability standards initiatives and accomplishments anchored to the FEHRM's mission.

Federal Agency, National and International Standards Collaboration

The FEHRM regularly collaborates with numerous stakeholder organizations in its pursuit of the development and implementation of standards that will improve interoperability. This includes engagement with national and international SDOs, federal, and industry partners.

Health Level 7

HL7 is an international SDO dedicated to providing a comprehensive framework and related standards for exchanging, integrating, sharing, and retrieving electronic health information. SDOs are member-supported organizations, often accredited by the American National Standards Institute, that develop and maintain standards to meet government and industry needs. FEHRM engagement with HL7 benefits the Departments by improving interoperability with external health care organizations. During CY2023, the FEHRM engaged with HL7 through numerous mechanisms and forums, including:

HL7 Balloting: HL7 Ballot Cycles and the associated WG meetings provide valuable opportunities for the FEHRM to influence the direction of interoperability initiatives and standards development. Balloting on emerging standards occurs each January, May and September and is the culmination of months of work from sponsoring HL7 WGs. The FEHRM reviewed 84 ballots that were released by HL7 during CY2023 and prioritized and voted on 18 that were determined to directly impact health data interoperability between VA and DOD. This involved coordination of those 18 ballots for subject matter expert review from a joint perspective, with topics including FHIR Implementation Guides, Electronic data exchange, Consolidated Clinical Document Architecture (C-CDA) and FHIR mapping, and CDA R2 IG. The resulting standards improve health data interoperability, positively impacting health care for Service members, Veterans and their families and improving patient outcomes.

 HL7 Working Groups: The FEHRM collaborated in several HL7 working groups, which allow federal agencies, stakeholders and the HL7community to work on standards and network with global industry leaders. During CY2023, the FEHRM engaged with, co-chaired, or led the following HL7activity examples:

Affinity Group: This forum serves as a key platform for reviewing and guiding the design of C-CDA and FHIR. It acts as a technical hub for experts to exchange ideas, driving innovation and providing guidance for implementing ONC's U.S. Core Data for Interoperability (USCDI). During the reporting period, CY2023, the FEHRM facilitated this group's activities concerning the FHIR Road-map for the Trusted Exchange Framework and Common Agreement version 2.0 and Qualified Health Information Networks.

C-CDA: In CY2023, the FEHRM team led design discussions on all data classes in USCDI v3. The design sessions included over 20 industry representatives, government liaisons, and ONC. The team developed designs for Health Insurance Information, Health Status Assessments, Laboratory, Medications, Patient Demographics, and Procedures. In partnership with HL7 and ONC, the FEHRM vetted and refined multiple designs. These designs were included in the C-CDA Companion Guide R3 January 2023 ballot and received 90 industry comments. The FEHRM team prepared the final publication in March and submitted for publication in April. HL7 published the C-CDA Companion Guide R3 on May 4, 2023. Specific to Q3 CY2023, the FEHRM, in collaboration with ONC and HL7, hosted design sessions for nine data classes and 20 elements included in USCDI v4.

Da Vinci Project: The HL7 Da Vinci Project brings together payers, providers and health care technology vendors, with a common goal of accelerating the adoption of HL7 FHIR as the standard to support and integrate value-based care data exchange across communities. The FEHRM collaborated on several initiatives such as the Payer-Provider Information Exchange , Coverage Requirements Discovery, Documentation Templates and Rules and Prior Authorization Support and provided input on a variety of topics, including the Centers for Medicare and Medicaid Services (CMS) Prior Authorization and Health Care Attachments Rules.

EHR Working Group at HL7 – Military Toxic Exposures Project: The FEHRM continues leading the integration of existing universal standards that enhance the interoperability of exposure and the exchange of information. This endeavor includes the analysis of existing FHIR published by HL7. Resources such as locations, demographics, and times could be a basis for exchanging exposure information. During CY2023, the FEHRM worked with HL7 groups and committees to approve the military toxic exposure project under the umbrella of the EHR WG.

The FEHRM will continue collaborating with HL7, ONC, and the Departments in CY2024 to advance these efforts for all federal partners involved in exposure-related clinical care and research.

EHR Working Group – Artificial Intelligence (AI): During CY2023, the FEHRM aided the EHR Working Group in drafting the Project Scope Statement for AI.Further, the FEHRM continued to contribute to the collaborative work with VHA in its efforts to develop a framework to incorporate interoperability standardizations when organizations plug AI on the top of health care data. The FEHRM Standards Group drove a framework to abide by national policies such as the White House Executive Orders, including E.O. 13985, E.O. 14091 and ONC's HTI-1 Final Rule for AI Transparency.

Patient Empowerment WG. The FEHRM continued to provide input as the Patient Empowerment WG resolved comments regarding the Request for Corrections to the VA and DOD for corrections to incorrect information that may appear in their Medical Record Implementation Guide. Patients and providers often make requests for medical records. The WG resolved technical issues to advance this effort.

Institute of Electrical and Electronics Engineers (IEEE)

With an active portfolio of nearly 1,300 standards and projects under development, IEEE is a leading developer of industry standards in a broad range of technologies that drive the functionality, capabilities, and interoperability of a wide range of products and services, transforming how people live, work, and communicate. The FEHRM helped to author the P2933 Clinical Internet of Things (IoT) Data and Device Interoperability with Trust, Identity, Privacy, Protection, Safety, Security (TIPPSS) Standard.

International Organization for Standardization (ISO)

ISO is an independent, non-governmental international organization with a membership of 170 national standards bodies. ISO brings together experts to share knowledge and develop international standards that support innovation and provide global solutions. The FEHRM has held a sustained engagement posture with ISO through numerous mechanisms and forums. The FEHRM co-authored and co-led the development and release of the final Public Health Emergency Preparedness standards, ISO Standard 5477 Interoperability of Public Health Emergency Preparedness and Response Information Systems. These standards are significant at both the national and international levels, including countries like Australia, Canada, Japan, and South Korea. The new standards will help countries, including the United States, collect, manage, and predict public health emergencies, ensure preparedness and effective responses, and more specifically cover aspects of toxic exposures.

U.S. Department of Health and Human Services

The FEHRM continued collaboration with U.S. Department of Health and Human Services (HHS) agencies to advance health care interoperability. Examples of these collaborative efforts include:

ONC

- Interoperability Standards Advisory (ISA): The ONC continues to encourage stakeholders to implement and use the standards and implementation specifications identified in the ISA as applicable to the specific interoperability needs that must be addressed. Along with the release of the USCDI and the Standards Version Advancement Process -approved standards, the ISA Reference Edition annual update is a critical way to advance standards. During CY2023, the FEHRM developed a summary and coordinated federal partner review of the updated ISA Reference Edition, enhancing awareness of its intent and soliciting feedback for inclusion in the next ISA Reference Edition release.
- **USCDI.** The FEHRM collaborated with ONC to develop USCDIv4, USCDIv5,USCDI+ and to promote federal and international dental standards and interoperability of dental electronic health data.

Enterprise Reporting and Performance Measurement

The FEHRM focuses on converging clinical information from multiple sources into one electronic system. The Health Data Interoperability (HDI) Dashboard displays key metrics that describe and show trends in progress toward increased levels of inter-organizational interoperability. Metrics are divided into four categories—Highlights, Department Integration, Community Partnerships & Patient Engagement, and Federal Partner Onboarding. A more comprehensive description of each individual metric is presented in Appendix A: Health Data Interoperability Metrics Details. The FEHRM continues to review new and existing measures for presentation on the HDI Dashboard (Figure 1). The measures are included in summative reports, including the Quarterly Interoperability Progress Report to Congress, the quarterly briefing to the FEHRM's Executive Committee and the FEHRM Annual Report to Congress. As deployment of the Federal EHR continues, the FEHRM will maintain its collaborations with stakeholders from the Departments and other federal partners with the aim of identifying new metrics for reporting as data availability evolves.



Figure 1 - Baseline Health Data Interoperability Metrics

FEHRM Interoperability Goals for CY2023 and Beyond

Looking ahead, the FEHRM will continue to operationalize and focus on convergence in its effort to advance interoperability and drive the Federal EHR. To achieve these goals, the FEHRM will:

- Continue its unifying efforts and delivery of common capabilities that add value to deployments including the EHR baseline; configuration and content management; software releases and upgrades; the Federal Enclave; cybersecurity; and virtual health.
- Maintain an integrated master schedule.
- Track joint risks, issues and opportunities.
- Manage the joint HIE.
- Lead efforts to onboard federal agencies to the Federal EHR.
- Lead, facilitate and support interoperability standards adoption.
- Support Exposure Interoperability efforts across healthcare and EHR initiatives.
- Position itself as the single operator of the Federal EHR.
- Identify and lead JSS efficiencies and opportunities.
- Capture lessons learned to inform continuous improvement.
- Expand communications to ensure continued stakeholder engagement.

Federal EHR Evaluation

The FEHRM test activity focused on two key areas to mitigate risks to the Federal EHR. The first, engagement with a vendor to verify the Federal EHR adheres to the interoperability performance standards outlined in the NDAA for FY2020. The second, an ongoing collaboration with DOD, VA and USCG to establish a multiphase approach for the control of test/pseudo records in the Federal Enclave (Production Environment).

In CY2023, the FEHRM performed the foundational work required by the NDAA for FY2020 to assess and confirm both the interoperability of the Federal EHR and the ability for DOD and VA clinicians to access and meaningfully interact with, a complete patient health record, regardless of the source of the information (i.e., the Federal EHR, DOD and VA legacy EHRs and available private sector health data sources). An agreement was established with an independent entity, MITRE, to conduct an evaluation.

With the adoption of a single, common Federal EHR, health care records that exist in the same DOD and VA system result in inherent interoperability. Providers can view health data and treatment information created across all VA and DOD treatment facilities. However, DOD and the VA are currently in a hybrid state as the Federal EHR is being deployed.

Interoperability requires aligning the complex ecosystem of DOD, VA and other federal partners with private sector care, operational medicine, medical devices, third-party applications, and legacy DOD/VA health records (as well as paper records) outside of the Federal EHR.

The FEHRM engaged in a multi-phased evaluation to assess the current state of interoperability. The first phase of this evaluation assessed the context of how the Federal Enclave interacts with the rest of the ecosystem. Leveraging the contributions of other evaluations, the assessment was broken into six use cases that will be assessed from VA and DOD locations.

Use Cases:

- a. DOD Clinician Interoperability with Veteran's Health Records
- b. VA Clinician Interoperability with Active-Duty Members' Health Records
- c. Federal Clinician Interoperability with Health Records from Private Sector
- d. Private Sector Interoperability with Federal Health Records
- e. Interoperability Between Legacy Systems and Federal EHRs
- f. Use of Interoperable Data Between Legacy System, Federal EHR and Third-Party Applications

Due to VA's strategic review and its corresponding deployment schedule impact, validation of the interoperability as required by the NDAA for FY2020 was not possible in CY2021 and CY2022 due to non-availability of a sharing site and the shift in the entire VA site deployment. The methodology, approach, site criteria, and use cases were updated and the FEHRM received approval in late CY2022. Despite these deployment delays, the FEHRM proceeded with establishing the context of this evaluation and its relationships to previous and on-going evaluations in the Federal EHR ecosystem, to further the multi-phase EHR evaluation. The FEHRM received approval to conduct a simultaneous validation between the DOD and VA using the following use cases:

Use Cases:

- a. DOD Clinician Interoperability with Veterans' Health Records
- b. VA Clinician Interoperability with Active-Duty Members' Health Records
- c. Federal Clinician Interoperability with Health Records from Private Sector

The FEHRM worked with the DOD and VA to identify sites where validation could take place, independent of the sharing status and focusing on the information available within the common Federal EHR. In preparation for the execution of the assessment the FEHRM with DOD & VA partners finalized the following:

- The NDAA for FY2020 Assessment Planning documentations (Assessment Plans)
- The NDAA for FY2020 Assessment Execution Procedures
- The NDAA for FY2020 Evaluation Site Requirements

The sites chosen, one for the DOD and one for the VA, have met specific criteria ensuring the validation represents the intent of the NDAA. Those sites are Brooke Army Medical Center (BAMC) and Jonathan M Wainwright Memorial VA Medical Center. The results of the assessment that was conducted in May of 2023 are below:

Observations: During the NDAA for FY2020 Independent Interoperability Assessment led by the FEHRM team, two observations of date discrepancy were made during the assessment of Use Case B.

- **Observation 1**: While validating the procedures list for the live physiatry patient, a different date was observed between the VA and DOD instance. The date difference observed was by **a month** for the same procedure.
- Observation 2: While evaluating the allergies and intolerances for the live surgery patient, a different date was observed between the VA and DOD instance. The date difference observed was by a day for the same allergy.

Conclusion: The observed data discrepancy between the VA and DOD has been identified as a known issue prior to the assessment and has been documented as part of the incident reporting process. This issue captured had a minimal impact on clinicians' ability to effectively engage and deliver patient care. The discrepancy was thoroughly reviewed and validated by both the VA and DOD. As a result, both Departments have reached an agreement to request a fix to resolve this issue in future enhancements.

Results Summary: The results of the assessment fulfilled the requirements laid out in the NDAA for FY2020 for use cases A, B, and C. The evaluation confirmed interoperability of the complete patient health record between VA, DOD clinicians and Veterans/Active-Duty Service Members, as well as interoperability with healthcare data originating in the private sector.

The results of the assessment show that the Federal EHR system is achieving the expected interoperability outcomes of access and meaningful interaction with patient healthcare data regardless of where care is provided. The evaluated clinical areas of Behavioral Health, Physiatry, Surgery, and Women's Health—along with all other clinical areas that rely on the same core EHR functions—are currently interoperable in this system.

This positively impacts patient care delivery providing insight on how clinicians can serve Veterans or Active-Duty Service Members across the Federal Enclave and corresponding private sector organizations. Interoperability between VA and DOD may also provide additional intuition on how clinicians can provide patient care in multiple clinical settings by having the appropriate data accessible and editable.

The FEHRM's Test and Evaluation efforts surrounding test patients in production continued implementing technical controls for the test/pseudo patients. The Federal Identity Management Test Patient Committee administratively tracked and governed the number of test patients in the production environment and developed the ability to categorize and assign records as a Test Patient. This new feature enhanced the ability to filter out Test Patients when gathering metrics from the production environment. At the end of CY2023, the Data Governance Board (DGB) took over oversight of Test Patients in Production as part of its overarching responsibility governing data.

Convening an Annual Meeting

During CY2023, the FEHRM convened the third Federal EHR Annual Summit of clinical and ancillary staff from the DOD, VA and USCG; community providers; and other leading clinical experts. The Federal EHR Annual Summit provides a platform for participants to understand how end users have been managing with the Federal EHR – including topics of interest, pain-points, and positives as experienced by clinicians, providers, and others who rely upon the platform. Participants engaged in constructive dialogues with Solution Owners, Solution Experts, Oracle Cerner contractors, and other professionals possessing specialized knowledge in the EHR system. These discussions focused on identifying opportunities to enhance the platform, aiming to better serve service members, veterans and other beneficiaries. The summit facilitated a platform for end users to deliver feedback directly to the leadership of the FEHRM, DOD and VA.

One-thousand end users registered for the three-day event, held on October 24-26, 2023. Staff from the VA, DOD, USCG, the FEHRM, Indian Health Services, Government Accountability Office (GAO), HHS, National Institutes of Health , NOAA, congressional staffers and the VA Office of Inspector General were among summit registrants. Additionally, this iteration of the Annual Summit introduced a series of wellness sessions. Participants were afforded the opportunity to accrue Continuing Education Units (CEUs), with each hour of session attendance qualifying for CEU credit, up to a maximum of 38 CEUs.

The summit comprised 19 distinct sessions, each focused on specific topics of interest as indicated by the end users. These sessions encompassed a range of subjects such as End User Engagement (EUE), Ambulatory Medicine, Inpatient Physician, Inpatient Nursing, and Pharmacy. These and other topics were selected as a result of the questions developed by the EUE team, derived from pertinent open-text responses in the Annual Summit Registration Survey.

The EUE team conducted analysis of 987 unique open-text responses from the survey, enabling them to curate 303 pre-populated questions for discussion throughout the 19 summit sessions. Each session was equipped with a set of at least twelve pre-selected questions, which were made available to the moderators. This approach was designed to facilitate focused discussions and promote active participation among attendees.

Throughout the course of the event, end users pinpointed training, user interface and experience, and the ticketing process as the primary areas in need of enhancement. This feedback, along with other inputs regarding the EHR, culminated in the identification of 126 topics that were not fully addressed during the summit.

These "Action Items" represent items for the FEHRM to analyze and work with DHA Solution Owners and VHA Solution Experts to determine if change requests were required to enhance the experience of the Federal EHR. Of the 126 Action Items, so far, 86 items have been closed and implemented in the various applications of the Federal EHR. Currently, 40 pending action items are still in progress to be identified and closed with DHA Solution Owners and VHA Solution Experts.

Table 1 - Action Items Closed and Pending

Closed	In Progress
86	40

Table 2 - Resolution Pathway for Closed Items

Session	Number Of Items
Ambulator	6
Behavioral Health	1
Business	17
Dental	1
Emergency Department	0
End User Engagement	12
FHCC	11
Inpatient Nurses	17
Inpatient Physicians	8
Laborator	5

Session	Number Of Items
Medical Device Integration	9
Opening Remarks	8
Perioperative	5
Pharmacy	3
Radiology	0
Reports and Registries	19
Rules and Alerts	0
Supply Chain and Logistics	3
Telehealth	0
User Roles and Provisioning	1

Comments and feedback collected during the CY2023 Federal EHR Annual Summit, which highlighted training or workflow recommendations, were provided to DHA-HI/DHMSM and VHA/EHRM-IO for review and consideration. During CY2023, the FEHRM continued to work with the DHA-HI/DHMSM and VHA/EHRM-IO Training and Configuration Teams to mitigate, solve or highlight training items identified during the summit and to resolve open action items.

The following table offers a comprehensive view, illustrating the distribution of contributions among participants. Notably, there was a marked similarity in the comments and insights shared by the participants from the DOD versus those from the VA. Additionally, a significant amount of opinions were shared from participants who had more than a year of experience with the Federal EHR. This table offers a comprehensive overview, illuminating the diverse perspectives and extensive experience that informed the discussions. It provides crucial context for comprehending the breadth of viewpoints and insights contributed throughout the summit.

VA Affiliation	Number of Comments	DOD Affiliation	Number of omments
VA participants who are not Federal EHR end users	14	DOD participants who are not Federal EHR end users	0
VA participants have not used or been trained on the Federal EHR at all yet	18	DOD participants have not used or been trained on the Federal EHR at all yet	16
VA participants who have only been trained on the Federal EHR	16	DOD participants who have only been trained on the Federal EHR	12
VA participants whose have an unknown amount of time on the Federal EHR	18	DOD participants whose have an unknown amount of time on the Federal EHR	17
VA participants who have used the Federal EHR for 4-6 months	0	DOD participants who have used the Federal EHR for 4-6 months	26

VA Affiliation	Number of Comments	N DOD Affiliation Co	lumber of omments
VA participants who have used the Federal EHR for 7-11 months	Ο	DOD participants who have used the Federal EHR for 7-11 months	6
VA participants who have used the Federal EHR for 1-2 years	159	DOD participants who have used the Federal EHR for 1-2 years	25
VA participants who have used the Federal EHR for more than 2 years	57	DOD participants who have used the Federal EHR for more than 2 years	136
TOTAL VA	282	TOTAL DOD	238

Unknown Affiliation	Number of Comments	FEHRM Affiliation	Number of Comments
Unknown	41	FEHRM Staff	1

An analysis of all 562 comments collected during the 2023 Annual Summit, including both action items and unactionable comments expressing participant opinion, was conducted to reveal sentiments about the Federal EHR among participants. Comments fell into seven distinct groupings, shown in the table below.

Grouping	Number of Comments
Positive Attributes and Outcomes of the Federal EHR	17
Tips Between Participants for Using the Federal EHR	39
Questions to Improve Participant Understanding	131
Errors or Issues within the Federal EHR	49
Requests and Disagreements about How the Federal EHR is Designed	181
Critiques of the Organizational System Around the Federal EHR	94
Critiques about Federal EHR Training	51

From the comments and their groupings, the researchers found areas of interest in end user sentiment that may inform decision making around the Federal EHR. The data compellingly demonstrates the unifying power of confronting shared challenges within the Federal EHR environment. Participants of the Annual Summit actively engaged in exchanging valuable information and strategies. This collective endeavor highlights a robust spirit of collaboration and mutual assistance. It is evident that users are not only seeking solutions to their own problems but are also keen to offer insights and support to others. Key decision-makers might explore ways to enhance the cultivation of a shared learning environment, which has promoted a community-driven approach to effectively navigating the complexities of the Federal EHR system for end users.

Researchers also found that the gathered data reveals a significant area of inquiry among participants: Understanding the nuanced differences in how the VA and DOD have adopted and utilized the Federal EHR system. This Topic generated numerous requests for clarification, indicating a keen interest in the operational and functional disparities between the two organizations' usage of the same tool. The conversations also illuminated an opportunity for cross-organizational learning and adaptation.

End users of the Federal EHR system have highlighted a critical requirement for an enhancement in its usability and user experience. This streamlined approach is sought to enhance efficiency and reduce the time and effort currently expended in interacting with the EHR system,

End users believe that by streamlining the user interface of the EHR system, there can be a significant reduction in the administrative burden that healthcare providers currently face.

An additional takeaway from the summit data is the complexity and inconsistency surrounding the ticket creation process within the Federal EHR system. Users often find themselves at a loss when encountering problems, with guidance on ticket submission being unclear and varied. The process, intended to be a straightforward solution for resolving issues, has instead become a source of frustration and inefficiency. After submitting a ticket, users frequently encounter lengthy resolution times, and in many cases, issues remain unresolved. The belief that entering a ticket is an expensive process has led to a reluctance or outright prohibition on ticket creation in some instances, further hindering problem resolution and negatively impacting user experience.

Finally, the collected data from the summit participants highlights a significant gap in the current training approach for the Federal EHR system. A common thread in the feedback is the perception that the training provided is too generic, lacking the specificity and depth needed for various roles, particularly for clinicians. Clinicians and other healthcare professionals are seeking more than just basic system knowledge; they need workflow focused training that aligns with their specific roles and daily tasks. Moreover, there is a recurrent call for ongoing support and advanced training opportunities. Users are seeking ongoing educational pathways to stay abreast of system updates and to enhance their skills further.

Clinician and Patient Satisfaction Survey

During CY2023, the FEHRM continued to collaborate with DOD and VA patient and clinician satisfaction SMEs to establish common instruments and methodologies to survey and measure clinical use and satisfaction with the Federal EHR. The FEHRM enacted this collaborative effort to assess satisfaction across DOD and VA equally, save government resources, reduce overall costs, and achieve Congressional mandates regarding data collection and analysis related to the Federal EHR. The survey instruments used for the clinician and patient satisfaction are nationally recognized: The KLAS Arch Collaborative for Clinician Satisfaction and the Consumer Assessment of Healthcare Providers and Systems Health Information Technology (CAHPS-HIT) item set for patient satisfaction/experience. Clinician and patient satisfaction surveys were both deployed in 2023.

Clinician Satisfaction Survey

The FEHRM partnered with DHA and VHA to develop overlapping clinician satisfaction survey questions based primarily on KLAS Arch Collaboratives' industry-standard question bank. In addition, the team narrowed the questions to eight overlapping and one demographic question for parsing data.

In CY2023, the DOD collected clinician satisfaction as part of the All Employee survey. The VA collected clinician satisfaction through its End User Satisfaction survey, which was deployed in the early summer, encompassing the Block 9 rollout. As with the prior year, the USCG also included the agreed-upon questions in an internal survey to clinicians who had transitioned to work with the Federal EHR platform. The survey questions, satisfaction and response rates are included in the following section.

The USCG CY2023 data had 14 respondents. Because the survey had less than 30 respondents (n<30), the USCG data is not included in this report.

The response rates reported below for the DOD surveys require additional explanation. The DOD had set a goal of 20% response rate with its survey contractor, KLAS. Though the 2023 and 2022 (12.9%) rates were below the DOD goal, KLAS stated the results are important because they were collected in response to a legislative requirement to report the results publicly. KLAS also alerted the DOD that its response rates were consistent with those achieved by other large EHR deployments.

Response rate:

- DOD: 3,848 respondents with an estimated 4.6% response rate¹
- VA: 1,845 respondents with an estimated 26.1% response rate

 1 Response rate per GAO Report: GAO, DOD Has Deployed New System but Challenges Remain. GAO-24-106187 (Washington, D.C.: April, 2024).

- 1. The electronic health record makes me as efficient as possible.
 - a. DOD: 20% Strongly Agree/Agree, 18% Neither Agree nor Disagree, 62% Strongly Disagree/Disagree
 - b. VA: 9% Strongly Agree/Agree, 10% Neither Agree nor Disagree, 81% Strongly Disagree/Disagree
- 2. The electronic health record enables me to deliver high-quality care.
 - a. DOD: 29% Strongly Agree/Agree, 31% Neither Agree nor Disagree, 40% Strongly Disagree/Disagree
 - b. VA: 10% Strongly Agree/Agree, 18% Neither Agree nor Disagree, 72% Strongly Disagree/Disagree
- 3. My initial training prepared me well to use the electronic health record.
 - a. DOD: 19% Strongly Agree/Agree, 13% Neither Agree nor Disagree, 68% Strongly Disagree/Disagree
 - b. VA: 9% Strongly Agree/Agree, 9% Neither Agree nor Disagree, 82% Strongly Disagree/Disagree
- 4. My ongoing electronic health record training/education is helpful and effective.
 - a. DOD: 25% Strongly Agree/Agree, 25% Neither Agree nor Disagree, 50% Strongly Disagree/Disagree
 - b. VA: 14% Strongly Agree/Agree, 24% Neither Agree nor Disagree, 62% Strongly Disagree/Disagree
- 5. Over the past two weeks, the electronic health record was available when I needed it and "down time" was not a problem.
 - a. DOD: 49% Strongly Agree/Agree, 17% Neither Agree nor Disagree, 34% Strongly Disagree/Disagree
 - b. VA: 26% Strongly Agree/Agree, 17% Neither Agree nor Disagree, 58% Strongly Disagree/Disagree
- 6. This electronic health record has the fast response time I expect (e.g., login time, screen refresh, retrieving information)
 - a. DOD: 21% Strongly Agree/Agree, 18% Neither Agree nor Disagree, 61% Strongly Disagree/Disagree
 - b. VA: 11% Strongly Agree/Agree, 13% Neither Agree nor Disagree, 76% Strongly Disagree/Disagree
- 7. The electronic health record allows me to deliver patient-centered care.
 - a. DOD: 39% Strongly Agree/Agree, 29% Neither Agree nor Disagree, 32% Strongly Disagree/Disagree
 - b. VA: 14% Strongly Agree/Agree, 24% Neither Agree nor Disagree, 62% Strongly Disagree/Disagree
- 8. I am sufficiently informed about any electronic health record information or notices that will impact my day-to-day job
 - a. DOD: 42 % Strongly Agree/Agree, 24% Neither Agree nor Disagree, 34% Strongly Disagree/Disagree
 - b. VA: 30% Strongly Agree/Agree, 26% Neither Agree nor Disagree, 44% Strongly Disagree/Disagree

The Clinician Satisfaction Work Group continues to meet with DOD and VA staff monthly. KLAS representatives participate as appropriate. The meetings offer opportunities to discuss cross-collaboration solutions, improvements to methodology, standardization of joint efforts, lessons learned from DOD and VA deployments, initiatives to improve experience and training, and iterations of clinician satisfaction survey data collection annually. The DOD All Employee Survey and VA End User Satisfaction Survey, described above, account for one sequence of data collection. The FEHRM also relies upon the Annual Summit Registration Survey, which all attendees of the Annual Summit must complete.

In CY2023 the Annual Summit Registration Survey included seventeen questions that include "free-text" and "choose all that apply" options. The questions assess satisfaction with the platform and the features that are working well or could be improved, and collects data on whether the respondent is an end user, how long they have engaged with the Federal EHR, professional interests, and "demographic" information like site location, role, department, and prior attendance at an Annual Summit. This represents the only clinician satisfaction survey that is identical across the DOD, VA, USCG, and other governmental agencies as end users complete the same survey regardless of their agency.

The most recent Annual Summit, October 24-26, 2023, collected data from 1,000 registrants, including, but not limited to: 430 from VA sites, 311 from DOD sites, 18 from the USCG, and 84 from FEHRM.

No 97 (22.65%)

No 80 (25.7%)

No 1 (5.6%)

Questions and Results:

1. Is the Federal EHR meeting your needs as a clinician/end user?

a.	VA (430):	Yes	72 (16.7%)
b.	DOD (311):	Yes	109 (35%)
c.	USCG (18):	Yes	8 (44.4%)

Top five options selected	VA
Training - Workflows	65
Training - Guides/Materials/Toolkits	41
Training - Workshops/Refreshers	38
Training - Community of Practice Calls/Office Hours	19
Training - Testing Sandbox	41

Top five options selected	DOD
Configuration - Enhancements	43
Configuration - Build/Design	43
Training - Workflows	41
Policy - Metrics/Key Performance Indicators	32
Training - Workshops/Refreshers	30

Unknown 86 (20%) Unknown 49 (15.8%) Unknown 4 (22.2%)

2. Do you have any concerns about the Federal EHR meeting your patients' needs?

- a. VA (430): Yes 128 (29.8%) b. DOD (311): Yes 91 (29.3%)
- c. USCG (18): Yes 3 (16.7%)

No 65 (15.1%) No 97 (31.2%) No 8 (44.4%) Unknown 62 (14.4%) Unknown 50 (16.1%) Unknown 2 (11.1%)

Top five options selected	VA
Configuration - System Functionality	87
Technical - Latency/Lag-Time	58
Training - Guides/Materials/Toolkits	55
Training - Workshops/Refreshers	48
Communication - Transparency Regarding Changes,	
Decisions, or Progress of the System	48

Top five options selected	DOD
Communication - Patient Portal	58
Configuration - System Functionality	47
Training - Guides/Materials/Toolkits	33
Communication - Transparency Regarding Changes,	
Decisions, or Progress of the System	32
Training - Workshops/Refreshers	24

- 3. If you could change anything in the Federal EHR, what would you change and why?
 - a. VA (430): 255 (59.3%) provided a response.
 - b. DOD (311): 238 (76.5%) provided a response.
 - c. USCG (18): 12 (66.7%) provided a response

Top five options selected	VA
Training - Workflows	124
Training - Testing Sandbox	101
Training - Guides/Materials/Toolkits	98
Configuration - Build/Design	96
Training - Workshops/refreshers	85

Top five options selected	DOD
Training - Workflows	87
Configuration - Build/Design	81
Training - Guides/Materials/Toolkits	73
Configuration - Enhancements	57
Training - Workshops/refreshers	53

4. Have you seen any improvement in the Federal EHR since you were first trained on the system?

- a. VA (430): 255 (59.3%) provided a response.
- b. DOD (311): 238 (76.5%) provided a response.
- c. USCG (18): 12 (66.7%) provided a response.

Top five options selected	VA
Other	76
Change Management - Knowledge/Awareness of	
Updates	39
Technical - Outages	35
Configuration - Enhancements	34
Training - Workflows	32

Ton five ontions selected	ססס
Other	63
Training - Workflows	48
Change Management - Knowledge/Awareness of	
Updates	45
Training - Guides/Materials/Toolkits	34
Configuration - Enhancements	32

- 5. What features of the Federal EHR do you like the most and why?
 - a. VA (430): 255 (59.3%) provided a response.
 - b. DOD (311): 238 (76.5%) provided a response.

c. USCG (18): 12 (66.7%) provided a response.

Top five options selected	VA
Other	92
Standardization - Enterprise-wide System	76
Data Availability - Reports	36
Standardization - Patient Safety	29
Ease of Use - User-centered, Comfortable Design	26

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Patient Satisfaction Survey

The FEHRM partnered with DHA and VHA and implemented the CAHPS-HIT item/question set to assess patient satisfaction. CAHPS-HIT questions are industry standard and are optional questions that can be included in the CMS-developed patient experience/satisfaction survey.

The FEHRM included questions that focused on the experience of EHR modernization principles that enable providers to deliver patient-centered care. The FEHRM narrowed the CAHPS-HIT question bank to six key questions, listed in Appendix B. The key focus being on question number five, "During your visits in the last 6 months, was this provider's use of a computer or handheld device helpful to you?" The methodology allowed comparison between legacy EHRs/systems, the use of computers/handheld devices and the Federal EHR, as well as the potential impact of go-live on those patient-centered care and experience.

By continuing to pose this question set in FY2O23, FEHRM and partners with the DHA and VHA continued the opportunity to track patient satisfaction with the application of computers/handheld devices in their exam rooms. The prolonged application of the CAHPS-HIT question set also extended through the entire DHA deployment, as all sites had transitioned to the Federal EHR (outside of FHCC) by the end of December 2023.

Longitudinal analysis was conducted over the course of FY2023 through the Departments' CAHPS methodologies, respectively titled Joint Outpatient Experience Survey (JOES-C) for DOD and Survey of Health Care Experience (SHEP) for VA. Survey respondents focused on Federal EHR in post analysis based on site(s) go-live schedule. Due to the expansive nature and multiple facets of the Federal EHR, it is a complex task to predict the long-term impact of the modernization efforts. It is important to note that the additional year of visual analysis upon the longitudinal and linear data trends continues to be neutral. The longitudinal and linear data trends demonstrate neither a positive nor negative variance in responses to evaluative questions between legacy and Federal EHR. The most recent visualization results are included in Appendix B:. As the visualizations document, the January 2024 data was not available for DOD. Flagging response levels and interactions with a contractor meant that this data was not available in time for inclusion in this report.

The Clinician and Patient Work Groups will continue to process and analyze data from DOD and VA to provide survey results regarding the impact of the Federal EHR. Combined with insights from the Annual Summit Registration Analysis and any other sources of patient or clinician satisfaction data, results from the JOES-C, SHEP, All Employee, and End User Satisfaction surveys will be utilized to derive end user insights and identify gaps, changes and opportunities that may arise with the implementation of the Federal EHR to provide the highest quality health care services for Service members, Veterans and their families. Further, the FEHRM End User Engagement Team is working with Department SMEs to develop a better mechanism to assess Patient Satisfaction.

Maintaining a Configuration Baseline

During CY2023, the FEHRM initiated management activities for maintaining the configuration baseline for the Federal EHR. Accomplishments and activities for the reporting period include:

Enterprise Technical Sessions

The FEHRM hosted eight Enterprise Technical Sessions (ETS), in partnership with DOD, VA and DHS chief engineering teams, on topics such as Federal EHR Logon Issues, Joint Operational Medicine Information Systems Theater EHR In-a-Box, and 724 Downtime Viewer. Participants included the respective DOD and VA PMOs and their prime vendors and key stakeholders responsible for the Federal EHR ecosystem. The ETS provided a forum for a series of technical discussions to solve enterprise challenges impacting the Federal EHR in support of the schedule of go-live activities throughout CY2023.

Identity Access Management

In CY2023, the FEHRM continued to facilitate working sessions with technical stakeholders from DOD, VA, DHS and enabling partners such as the Defense Manpower Data Center (DMDC). Throughout the year, the selection of the unique user identification transitioned away from FedUID and landed on continuing to use the current Electronic Data Interchange Personal Identifier (EDIPI) solution.

During the reporting period, CY2023, the Joint Executive Committee (JEC) tasked DMDC with providing a cost and implementation timeline analysis for the continued use of EDIPI. Subsequently, upon receipt, the FEHRM was tasked with providing guidance on budgetary and governance ramifications of the DMDC's analysis. The FEHRM guidance is projected for Q2 FY2024.

Federal Enclave Management and the Health Report

In CY2023, the FEHRM continued to produce the monthly "Federal EHR Health Report," a consolidation of multi-agency incident, availability, and deployment data. This monthly health report is a presentation of system availability and incident data from components of the Federal Enclave, including EHR Core solutions, Federal High Assurance Clinical Application Services (HA-CAS), Clinical Application Service/Value Added Network (CAS/VAN), DMDC, DEERS and other solutions, and provides month-over-month performance trends and system uptime. The FEHRM continues to analyze the data received from multiple agency specific data sources in an effort to improve the content of the Federal EHR Health Report.

Federal Release Management

In CY2023 the FEHRM continued to support the Federal Release Working Group (FRWG) which provides oversight on all release management activities in the Federal EHR. With input from the federal government, the FEHRM created the FRWG Charter which specifies the purpose of the FRWG, its rationale, its goals, and its participants. As well, the FEHRM completed an accompanying special operating procedure which represents the agreed upon processes of the FRWG as decided by the representatives of the federal partners. The FEHRM completes weekly Meeting Documentation Records for all weekly FRWG meetings, which are distributed to over 200 participants. The FEHRM was able to support the DHMSM release management team by augmenting their staff as they experienced personnel shortfalls.

Federal Domain Management

In CY2023, the FEHRM continues to utilize the Domain Management (DM) Execution Guide as a reference for the DM process for the Federal Enclave. The FEHRM, along with departmental SMEs and vendors collaborate to maintain oversight on domain availability for go live events, including preparation for FHCC. The FEHRM reviews domain refresh schedules and block/cube release schedules and was able to deconflict training plans with domain availability.

EOC

The Emergency Operation Center (EOC) activity is a critical component of operationalizing the FEHRM. The EOC prepares the Federal EHR system owners and partners in the ecosystem for the intense schedule of go-live activities, monitors for Federal Major Incidents and keeps partners informed of planned activities that could impact go-live events. The EOC continued to support cross-organizational collaboration and executive-level reporting on the Federal Enclave and ecosystem during federal go-live events.

In CY2023, the EOC provided daily joint executive level briefings and updates for five DOD and one NOAA go-live event. These briefings included root cause and corrective actions taken for unplanned incidents impacting the Federal EHR and an overview of planned activities that could impact FEHRM partners. The EOC activity added value to the Federal EHR through the following activities: automating analysis tools, enabling shared agency reporting, refining response processes, participating in joint problem management improvement efforts, sharing observations regarding traceability of incidents and changes in the ecosystem, and continuing to expand and enrich stakeholder engagements.

Cybersecurity - Cyber Tabletop

In alignment with Executive Order 14028, *Improving the Nation's Cybersecurity*, the FEHRM conducted a series of targeted cyber tabletop exercises in CY2023. The exercises were integral to strengthening the cybersecurity posture of the Federal EHR, focusing on incident prevention, detection, escalation, and response coordination. Participants included technical subject matter experts (SMEs) from DOD, VA, and their respective vendors. The exercises culminated in an after-action report delivered to executive management. Lessons

learned from the exercises were subsequently incorporated into the Joint Cybersecurity Incident Management Framework and other related documents.

Cybersecurity – Joint Incident Management Framework

Foundational to the cybersecurity posture of the Federal EHR is the development and refinement of a comprehensive framework for responding to cybersecurity incidents. In CY2023, the framework, influenced by incident management plans from DOD, VA, the Leidos Partnership for Defense Health, and Oracle Cerner; incorporated best practices into the framework. Supporting materials, such as the FEHRM Joint Cybersecurity Incident Management Standard Operation Procedures and the FEHRM Joint Cybersecurity Ransomware Communications Guide, were also developed.

Cybersecurity – Joint Memorandums of Understanding/Agreement (MOU/MOA)

The FEHRM is facilitating working sessions to review, update and consolidate existing joint MOUs/MOAs focused on the Federal Enclave. In CY2023, the FEHRM engaged with SMEs from DOD and VA to ensure MOU/MOA content is comprehensive, accurate and up to date to meet the requirements of the National Institute of Standards and Technology (NIST)/ Federal Information Security Management Act (FISMA) compliance.

Cybersecurity – Joint Security Operations Center (JSOC)

In CY2023, the FEHRM initiated the creation of a Joint Security Operations Center (JSOC) that shares the responsibility of cyber incident monitoring and reporting, as well as information-sharing across various organizational components impacted by the Federal Enclave. Collaborating with stakeholders, the JSOC will design joint processes and procedures to manage, monitor, analyze, detect, prevent, respond to threats, and ensure the confidentiality, integrity, and availability of the Federal Enclave information assets.

Cybersecurity - Cyber Assessment

In CY2023, the FEHRM has embarked on a mission to plan, coordinate, and conduct an independent cyber assessment on the operational readiness of the Federal EHR system and its supporting clinical infrastructure within the DOD and VA healthcare delivery ecosystem. Collaborating with stakeholders, the FEHRM's objective is to generate an assessment report with a set of actionable recommendations to improve the resiliency of the federal healthcare delivery ecosystem.

Cybersecurity – Risk Mitigation

Consistent with its charter to orchestrate the joint cybersecurity program, the FEHRM continues to proactively address cybersecurity risks to the Federal Enclave. In CY2023, the FEHRM conducted ongoing reviews of Federal Enclave activities to comply with NIST and DOD cybersecurity requirements. A significant aspect of this effort is facilitating the onboarding of federal agencies into the Federal EHR system, ensuring adherence to the relevant NIST and DOD guidelines.

Joint Functional Requirements

In CY2023 the FEHRM, along with the Health Information Policy Workgroup, the VA Health Information Management (HIM), and the DHA Patient Administration Division (PAD), developed a joint release of information requirements that satisfied DOD and VA and release of information end-user requirements and workflows. To develop a single pathway for requesting and delivering health records from DOD and VA sources, in CY2023 the FEHRM will facilitate the development of a Business Associate Agreement (BAA) between DOD and VA. Once a BAA is finalized, the FEHRM expects to have a single method so documents may be released to patients.

Separation Health Assessment

The Separation Health Assessment (SHA) is a single separation examination which supports both the DOD separation/retirement process and the VA disability compensation process. The SHA examination documents any medical concerns identified during a Service Member's military career, assists with identifying future illnesses, and reduces redundant examinations between both agencies. Historically, Service members transitioning out of the military and filing for VA disability had to receive similar but not quite the same medical exams. The Department of Defense's policy required an examination prior to transitioning out of the military to ensure that all healthcare needs were met prior to the Service Member's departure. The VA provided an exam to evaluate the claims condition to assign a disability rating based on the severity of the service-connected condition(s). This collecting of the Service Member's treatment record information was also predominantly captured via paper documentation. The FEHRM is engaged on several fronts targeted at advancing the SHA process to the future state. The future state is defined as operationalizing the new SHA form within the joint Federal EHR and associated record systems. This transformation includes optimizing user interfaces, data flows, and engaging improvements that support data-driven outcomes. Having access to computable, electronic flowing data as needed, will help to ensure the highest quality care is provided to separating Service Members seeking to access the VA's Benefits Delivery at Discharge program. Further information requested in the new SHA form includes:

- health, wellness, fitness to serve/separate, continuity of care, disability evaluations
- environmental and occupational exposure
- suicide and violence risk assessments, sexual trauma support services, and mental health assessments at separation

The DOD and VA continue to reach major milestones within the SHA project. Recently during 4th quarter of 2023, the SHA WG started the implementation of a fully electronic data transfer process for those Service Members who file benefits claim while at the same time separating from the military. SHA documents are now submitted by both Departments into the Health Artifact and Image Management Solution (HAIMS). HAIMS provides enterprise-wide data sharing ability via digitized artifacts and images.

In April of 2023, the VA Part A of the new SHA form was published on VA.gov. The following May, the VA deployed the content for the SHA Part B. Following department-specific naming conventions, the VA calls the new SHA form the VA SHA Disability Benefits Questionnaire.

The continued approach to the future state included the FEHRM leveraging the DHA/VHA standardized methodology to document current and future state process activities. Guided by input from clinicians, specialists, benefits examiners, subject matter and system experts, requirements elicitation was conducted, and change management oversight principles were incorporated, to develop the current and future state joint process models, architectural builds, and other needed requirements documents. Now that the technical assessments are complete, the SHA WG is waiting on the authority to operate, whereby software development begins for implementing the SHA process into the Federal EHR. Implementing this MHS GENESIS-based process flow will include leveraging the patient-facing Patient Portal (SHA Part A Self-Assessment) and clinician-centric functionality for clinicians and staff (SHA Part B Clinical Assessment).

Transitioning to an electronic dataflow/workflow and collection of relevant medical information will allow for a more comprehensive understanding of the Service member's health status at the time of separation and improve the health and wellbeing of separating Service members and new Veterans by streamlining the transition of health care from the DOD to VA Benefits.

Joint Configuration Management

The FEHRM manages and optimizes the Joint Sustainment and Adoption Board (JSaAB). This joint governance body is responsible for the approval of all Federal EHR content and configuration changes. The JSaAB directly informs the FCCB and is essential to operating the Federal EHR, providing DOD, VA and USCG functional oversight of all configuration decisions impacting the production baseline. In CY2023, the JSaAB approved 1522 content and configuration changes. In addition, the JSaAB reviewed and concurred with 596 content and configuration changes approved at a lower level by the DOD and VA Solution Teams. The JSaAB continued to optimize quarterly updates to the JSaAB Catalog which represents the full scope of the types of changes within the JSaAB's authority. Updating approval authority levels and clarifying change types with the catalog allows for efficient and effective issue resolution at the lowest level with DOD and VA. There were 275 changes made to the JSaAB catalog in CY2023.

The FEHRM, in collaboration with JSaAB Co-Chairs, initiated a joint configuration change catalog that includes all AMS/Oracle Health executable changes via the FCCB, including all local and Solution Owner/Expert level changes. This effort operationalized the former AMS catalog and now consists of the full scope of available approved changes, authority level (level in which authorization is approved).

In CY2023, the FEHRM CHIO and Functional Chairs of JSaAB, established nine federallevel work groups to improve and optimize joint efficiency in the issue resolution and solution optimization processes. The nine federal groups chartered under the FEHRM CHIO and JSaAB are as follows:

- Federal Charge Services Working Group (FCSWG): The FCSWG was established for governance of a charge services solution for DHA and VHA. The Group reviews charge build additions, modifications and inactivations and ensures compliance with all legal and regulatory requirements for healthcare organizations, as well as agency-specific policies and requirements.
- Federal Oncology Working Group (FOWG): The FOWG was established to manage issues and tickets, as well as optimize efforts for the joint oncology solution for DHA, EHRM-IO and VHA. This optimization includes PowerPlan "order sets" configuration and implementation, oncology medications, and the review of new and emerging capabilities in the oncology solution.
- Federal Rules and Alerts Working Group (FRAWG): The FRAWG was established for joint governance, optimization and development of best practices with the clinical decision support (CDS) rules and alerts in the Federal EHR. The goal and objective are to review requested rules from functional teams, standardize content and style of alerts in the domain, and establish an overall governance structure for maintaining rules and alerts jointly across the Departments.
- Federal Research Working Group (FRWG): The FRWG was established for the governance of research-related Oracle Cerner health solutions in the Federal EHR across the Departments and endorsement of research-related changes through the issue resolution process.
- Federal Positions Working Group (FPWG): This FPWG was established for federal governance of positions (roles) in the Federal EHR. Review opportunities to align positions across DOD and VA and to streamline those roles based on end-user feedback/requests through the issue resolution process.
- Federal FirstNet Working Group (FFWG): New in CY2023. This federal WG was established for federal governance of the emergency medicine user and patient experience alignment in the Federal EHR. This WG focuses on a common configuration across DOD and VA for all components of the emergency medicine experience focusing on end-user feedback and requests through the issue resolution process.
- Federal Inpatient Working Group (FIWG): New in CY2023. This federal WG was established to address the inpatient user and patient experience across both DOD and VA for configuration alignment and optimization of workflows. The group addresses all the functional components of the inpatient experience. This group also has a number of sub-working groups that evaluate more specific components of the joint user and patient experience.

 Federal Power Plans Oversight Working Group (FCSWG): In CY2023, an essential component of the joint EHR is Cerner PowerChart. Standardizing the user experience with PowerPlans (clinical plans for patient care) across both the DOD and VA capitalizing on previous Joint DOD VA Clinical Practice Guidelines (CPGs) is the focus of this working group. As with to the WGs, this group is continuously reviewing opportunities to align PowerPlans across DOD and VA based on end-user feedback/ requests through the issue resolution process.

The CHIO established, through the Data Management Board and endorsed by the JSaAB, two federal-level committees/work groups that manage the baseline standardization and optimization of data in the Federal EHR. One of the committees, the Event Set Hierarchy Committee, reviews the organization and structure and makes recommendations for clinical data that is viewable to end users through many of the components of the EHR. The other committee, Code Set Management, manages the codes that are used inside of the Federal EHR. Code sets are one of the backbones of the EHR configuration, and the committee develops and oversees the standardization of naming conventions of many of the code values that are internal to the system.

Lastly, the FEHRM continues to manage the Functional Decision Group (FDG), which is a body of senior clinical, business and health informatics leaders from EHRM-IO, VHA and DHA. The FDG reviews, analyzes and decides on critical joint functional (user experience) issues that apply to the Federal EHR.

FEHRM Revenue Cycle/Business Processes

In CY2023, the FEHRM, DHA and VHA jointly reviewed, analyzed, and provided recommendations on optimal business processes to support laboratory and radiology shared services at JSSs, where the DOD sharing facility deployed the Federal EHR. JSSs review during CY2023 included NMC Portsmouth and Hampton VAMC, Keller ACH and Castle Point VA, 375th MDG and St Louis VAMC, 88th MDG Wright-Patterson and Dayton VAMC.

Additionally, the FEHRM initiated the development of a business pilot in collaboration with VHA and DHA business teams. The business pilot seeks to establish an interfacility process to submit authorization numbers as part of ancillary services sharing at JSSs. This initiative will facilitate the identification and billing of services by the service-providing Department.

Joint Enclave Data Management

The Executive Data Management Board continued its role as the authorizing and prioritizing function for joint data management activities impacting the Federal Enclave. During the reporting period, integrated processes and workflows were further established between governance boards with a focus on efficiency, effectiveness and traceability. In support of governance integration, the following workflows and processes were incorporated into the FEHRM management solution:

- Data Governance: Under the executive body, data is governed by the DGB with stakeholder representation from constituent bodies. In CY2023, six committees and one work group were established and chartered under the purview of the DGB to ensure full support of data standards, quality and sharing. The FEHRM Data Management team established the Data Quality Committee (DQC) and Test Patient in Production (TPIP) Work group (WG) to review and adjudicate data quality issues and requirements. The DQC provides guidance and drives resolution for issues raised by the DGB and may recommend actions to promote data quality improvement. The TPIP WG focuses on reducing the number of test patients intermingled with real patient data in the production EHR while providing essential test patients for legitimate test purposes. Together, the DQC and TPIP WG provide an open collaborative forum for DHA and VHA stakeholders to discuss concerns and exchange ideas. The DQC and TPIP WG meet weekly to review test patient in production requests, decide on data quality issues and propose guidance to maintain data standards at the highest possible level.
- Analytics Governance: Under the executive body, data and analytics is governed by the Analytics Governance Board. In CY2023, seven committees were established in support of analytic/reporting standards and data warehouse access controls.
- Federated Interagency Terminology Service: In CY2023, the Federated Interagency Terminology Service, now reporting up to the FEHRM DGB, engaged with vendors and Departments to jointly review and manage critical terminology projects. Mappings for COVID-19 Lab Tests and Specimen Source (SNOMED-CT) are in progress. The FEHRM terminologists also continue to monitor and normalize JLV, CHDR legacy and Federal EHR clinical domains, including medication status, allergens, medications, laboratory results and document types.
- ServiceNow to Jazz Integration: In CY2023, the FEHRM Data Management team streamlined its intake processes in the IBM Engineering Lifecycle Management (IBM JAZZ) ticketing system to pull data from the DHA ServiceNow to identify data quality related issues that potentially may not have reached proper destination as efficiently for resolution. The FEHRM improved the process workflow for submitting requests by restructuring the existing cumbersome briefing of record into a streamlined Request Form reducing the requestor's level of effort significantly.

FEHRM Financial Summary

Amounts Expended for FEHRM Activities and Purpose

In support of FEHRM activities during CY2023, the FEHRM obligated a combined total of \$50.9 million from DOD and VA funds (Figure 2) in FY2023. These funds were allocated toward civilian employees and Public Health Service officers' salaries; general management and administration; program management; functional community requirements; and software licenses and maintenance.

					0	
FEHRM Fiscal Year 2023 Funding (\$ 000s)					Combined	Combined
DOD	Alloc	ations (\$ 000s)	Obl	ligations (\$ 000s)	Allocations (\$ 000s)	Obligations (\$ 000)
Application / Software	\$	2	\$	2		
End User / Other	\$	64	\$	64		
IT Management / External Labor	\$	17,395	\$	16,630		
IT Management / Internal Labor (DHA Civilian)	\$	2,623	\$	2,623		
IT Management / Other	\$	189	\$	189		
IT Management / Outside Services	\$	768	\$	764		
DOD Total	\$	21,042	\$	20,273		
VA	Alloc	ations (\$ 000s)	Ob	ligations (\$ 000s)		
EHRM IO						
Labor - Government Employee Costs	\$	1,147	\$	738		
Labor - Support Contract Costs	\$	17,726	\$	16,758		
Travel and Lodging Related Costs	\$	87	\$	47		
OIT						
Labor - Government Employee Costs	\$	549	\$	549		
VHA						
Labor - Government Employee Costs	\$	889	\$	777		
Other Non-Descriptive Costs	\$	5	\$	3		
Travel and Lodging Related Costs	\$	30	\$	1		
VA Total	\$	20,433	\$	18,872		
MIPR'D to FEHRM ¹¹	Alloc	ations (\$ 000s)	Ob	ligations (\$ 000s)		
IT Management / External Labor	\$	11,880	\$	11,800		
Total Fiscal Year 2023 Funding (\$ 000s)					\$ 53,354	\$ 50,945

Figure 2 - FY2023 Financial Summary

1. Funds transferred from VA to DOD per reimbursable 7600A support agreement with EHRM IO to leverage FEHRM support contract.

The FEHRM budget from both Departments support the baseline operational expenses of the FEHRM; however, additional funding for calendar year 2023 in amount of \$11,880,000 was required to increase support beyond the FEHRM baseline for the joint EHR deployment efforts at FHCC. As the VA EHR deployment schedule continues to be reviewed and modified, the FEHRM budget will require further evaluation by both Departments to provide adequate resource support for FEHRM's mission.

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Appendix A: Health Data Interoperability Metrics Details

HDI Metrics Details: Throughout CY2023, the FEHRM, DOD and VA continued to collaborate to monitor baseline HDI metrics and the progress toward modernization and enhancement of HDI by both Departments. Each section displays a different interoperability dimension, as derived from the FEHRM's HDI Measurement Framework: Department Integration, Patient Engagement, Community Partnerships, and Federal Partner Onboarding. Figure 3 represents a snapshot of the CY2023 HDI Metrics Dashboard.



Figure 3 - CY2023 HDI Metrics Dashboard

CY2023 Highlights: Metric highlights are captured in Table 3 below.

Table 3 - Calendar Year Highlights

Metrics	Highlights
Blue Button (VA&DOD)	In Q2 FY2023, DOD Blue Button Downloads surged in March due to patients preparing for the Wave Walter Reed National Military Medical Center & Wave Ft. Belvoir MHS Genesis (MHSG) go-live, while VA downloads dropped due to a system change requiring manual downloads. Q3 saw a 50% decrease in DOD Blue Button views after the NCR went live with MHSG. VA downloads decreased by 25% due to the same system change. In Q4 FY2023, VA Blue Button views, downloads, and users rose, possibly influenced by My HealtheVet enhancements and the toxic exposure campaign. DOD downloads increased after the launch of MHSG in Europe. In Q1 FY2024, DOD downloads continued to decline with MHSG implementation, and a spike occurred in October before MHSG completed its Pacific implementation. Users still accessed HAIMS data via Tricare Online (TOL). TOL will continue displaying Blue Button data until MHSG Patient Portal makes legacy data available by FY24/early FY25.
HIE Transactions	HIE transactions, increased in FY2024 Q1. This surge in transactions can be attributed to the recent implementation of CareQuality, which went live during the months of August and September. Notably, September marked the first full month of CareQuality's operational status. While it was anticipated that the integration of CareQuality would lead to a significant uptick in metrics, it is crucial to acknowledge that the observed increase may be higher than initially projected. This disparity is a result of an issue on the CareQuality side, which has since been identified and resolved in December.
Federal Partner Onboarding	The FEHRM is actively collaborating with federal partners to enhance healthcare operations through the implementation of the Federal EHR. NOAA successfully implemented the Federal EHR in June 2023. CBP's West Virginia Advanced Training Center Health Care Clinic is still in the Collaborative Discovery Phase. Additionally, the AFRH is working on their Independent Government Cost Estimate to potentially join the Federal EHR.

DOD and VA use the software applications and tools described below to support EHR data interoperability:

1. Joint Longitudinal Viewer (JLV). The JLV, released in 2013, is a web-based graphical user interface jointly developed by DOD and VA to provide a near real-time, integrated and chronological view of EHR information. It allows clinicians to view an integrated, read-only display of patient data from DOD, VA and joint HIE participating provider organizations within a single application. JLV retrieves clinical data from numerous native data sources and systems, displayed in Figure 4.



Figure 4 - JLV Data Sources and Systems

2. **Joint HIE.** The joint HIE is a secure network that shares Veteran and MHS beneficiary health care information electronically with United States Military Entrance Processing Command (USMEPCOM), NOAA, and participating provider organizations who join the eHealth Exchange² and CommonWell.³ Community partners who join undergo stringent security requirements to access patient records and

² eHealth Exchange - Network of Networks connecting federal agencies and non-federal healthcare organizations so medical data can be exchanged nationwide. eHealth Exchange online, October 14, 2022, <u>https://ehealthexchange.org/</u>

³ CommonWell – A service that collectively allows individuals and caregivers to find and access records associated with a patient regardless of where the care was delivered. CommonWell Alliance Online, October 14, 2022, <u>https://www.commonwellalliance.org/about/faq/</u>

health information securely, regardless of whether the facility is a civilian provider, military hospital, outpatient clinic or VA Medical Center.

3. **Blue Button.** Blue Button enables patients from DOD and VA to access their personal health data from their EHR, including allergies; laboratory and radiology results; vital signs; and outpatient medications, problem lists and encounters. The new MHS GENESIS Patient Portal also allows TRICARE beneficiaries to exchange secure messages with their care team; schedule medical and (active duty) dental appointments online; access notes, labs and medications; and request prescription renewals online.

The FEHRM, DOD and VA continue to expand HDI by improving upon the more than 8 million patient records currently shared monthly between the two Departments, as defined by the total number of JLV records viewed by the Departments reported as of December 31, 2023.*

*As proxied by total number of patient records viewed using the JLV for DOD and VA during the last day of the calendar year.

Department Integration

Value Statement: The FEHRM tracks utilization of legacy and modern EHRs, which enables Departmental leadership and Congress to assess the reliability of legacy systems and evaluate the Departments' progress in transitioning from legacy systems to the single, common Federal EHR.



JLV Total Active Users
Definition
Active User: a unique user who has logged into JLV in a given month.



JLV Records Viewed
Definition
Monthly total number of patient records viewed using the JLV for DOD, VA and USCG.

		JLV	OPERATIONAL AVAILABI	LITY	
99.79% ¥	100% 90%	•			
DOD	80%	FY23Q2	FY23Q3	FY23Q4	FY24Q1
98.79% 8	100% 90%	•			
VA	80%	FY23Q2	FY23Q3	FY23Q4	FY24Q1

JLV Operational Availability

Definition

DOD – The percentage of time during the month that the JLV was available for log in and functionally operational by DOD and VA users (i.e., available for users to conduct a patient search and to access both DOD and VA EHR data in the cloud environment).

VA – The percentage of time during the month representing the end-user experience where JLV was available for login and functionally operational (users able to conduct patient searched/lookup and retrieve DOD, VA and Federal EHR data in production environments).

Community Partnerships

Value Statement: 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 as best practices and improvements are implemented.





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Definition

Monthly and cumulative count of participating provider organizations who are partners in the joint HIE (a provider organization is counted as one partner if the provider has one or more data sharing agreement(s) with DOD or VA).

Patient Engagement

Value Statement: Blue Button serves as the foundation for broader patient engagement activities within the Departments, enabling patients to have easy access to their own health information in a usable format. The FEHRM monitors several metrics associated with Blue Button that show patient engagement with their integrated and consolidated health records from DOD and VA legacy systems' patient portals over time.



Definition	
Total number of end users per m	data downloads (e.g., PDF, text) generated by onth.
end users per m	onth.



Blue Button Views			
Definition			
Average number of views generated by end users per month.			



Monthly Unique Blue Button Users	
Definition	
Average number of Blue Button users in a month.	

Federal Partner Onboarding

Value Statement: The FEHRM collaborates with federal partners by providing insight, assisting with requirements and overall support of their interest in joining the Federal EHR enterprise.



G Federal Partner Onboarding Definition Progress of collaborations with new federal partners who are interested in joining the Federal EHR enterprise. ceed Ceed

Appendix B: Patient Satisfaction Survey Results

Patient Satisfaction Survey Questions

Question #	DOD and VA	Available Responses
1	In the last 6 months, did this provider use a computer or handheld device during any of your visits?	Yes No
2	During your visits in the last 6 months, did this provider ever use a computer or handheld device to look up test results or other information about you?	Yes No Don't know ('DK')
3	During your visits in the last 6 months, did this provider ever use a computer or handheld device to show you information?	Yes No
4	During your visits in the last 6 months, did this provider ever use a computer or handheld device to order your prescription medicines?	Yes No DK
5	During your visits in the last 6 months, was this provider's use of a computer or handheld device helpful to you?	Yes, definitely Yes, somewhat No
6	During your visits in the last 6 months, did this provider's use of a computer or handheld device make it harder or easier for you to talk with him or her?	Harder Neither Easier

Patient Satisfaction Visual Analysis

Question 1: In the last 6 months, did this provider use a computer or handheld device during any of your visits? Percentage of Positive Responses (Yes).



DOD Post Go-live Positive Response %: Longitudinal FY23

VA Post Go-live Positive Response %: Longitudinal FY23



Question 2: During your visits in the last 6 months, did this provider ever use a computer or handheld device to look up test results or other information about you? Percentage of Positive Responses (Yes).



91.2% 90.7% 92% 90.4% (302)(282) 89.9% (273)Positive Rate * (213) 90% 87.5% 87.3% 87.0% 88.6% 293 88% (288)(268)88.0% (281) 87.7% (271)(264)86% 86.3% (270) 84% 83.9% 82% (260)Oct22 Nov22 Dec22 Jan23 Feb23 Mar23 Apr23 May23 Jun23 Jul23 Aug23 Sep23 Month of the Survey

VA Post Go-live Positive Response %: Longitudinal FY23

Question 3: During your visits in the last 6 months, did this provider ever use a computer or handheld device to show your information? Percentage of Positive Responses (Yes).



VA Post Go-live Positive Response %: Longitudinal FY23 62% 59.8% 59.0% (199) 60% (138)57.8% 57.1% (192)56.6% Positive Rate * 58% (180)55.9% (185)(175) 56% 56.3% 55.9% 52.9% 55.4% (174)(166)54% (165)(165)52% 52.6% (162) 50% 50.0% 48% (153)Oct22 Nov22 Dec22 Jan23 Feb23 Mar23 Apr23 May23 Jun23 Jul23 Aug23 Sep23 Month of the Survey

Question 4: During your visits in the last 6 months, did this provider ever use a computer or a handheld device to order your prescripton medicines? Percentage of Positive Responses (Yes).





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VA Post Go-live Positive Response %: Longitudinal FY23 95.0% (283)95% 93.9% 93.7% (291) (311) Positive Rate * 94% 92.6% 92.2% 93% (287) (282) 92.7% 92% (291) 92.1% 91.9% (268)91% 91.2% (215) (300) 90.6% 90% 90.2% 90.1% (298) (282)(277)89% Aug23 Oct22 Nov22 Dec22 Jan23 Feb23 Mar23 Apr23 May23 Jun23 Jul23 Sep23

Month of the Survey

Question 6: During your visits in the last 6 months, did this provider's use of a computer or handheld device make it harder or easier for you to talk with him or her? Percentage of Positive Responses (Easier).





VA Post Go-live Positive Response %: Longitudinal FY23