FEDERAL ELECTRONIC HEALTH RECORD MODERNIZATION

FEHRM
Interoperability Progress Quarterly Report

FIRST QUARTER, FISCAL YEAR 2023

William J. Tinston
Director
Federal Electronic Health Record
Modernization (FEHRM) Office

Table of Contents

Introduction

Purpose of this Report

- The Federal Electronic Health Record Modernization (FEHRM) Interoperability Progress Quarterly Report responds to House Report 117-388, page 261, accompanying H.R. 8236, the Department of Defense Appropriations Bill, 2023.

FEHRM Office Overview

- During the first quarter of fiscal year 2023 (Q1 FY2023), the FEHRM prioritized a strategy of operationalization and convergence in its mission to implement a single, common federal electronic health record (EHR) to enhance patient care and provider effectiveness, wherever care is provided. This operationalization and convergence strategy unified efforts across the federal EHR ecosystem and delivered common capabilities. The common capabilities the FEHRM delivers include:

    - Managing the Federal Enclave, a shared environment to contain the federal EHR and supporting systems.

    - Managing the joint health information exchange (HIE), a data-sharing capability.

    - Overseeing configuration and content changes to the EHR agreed on by the Departments through a joint decision-making process facilitated by the FEHRM.

    - Providing 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.

    - Advancing interoperability, the meaningful use and exchange of data, to improve continuity of care among and between public and private-sector providers.

    - Leading analysis and integration of deployment activities at joint sharing sites, sites where resources are shared between DOD and VA.

Federal EHR Strategy

Joint Configuration Management

The FEHRM manages and optimizes the Joint Sustainment and Adoption Board (JSaAB). This joint governance body approves all federal EHR content and configuration changes. The JSaAB directly informs the Federal Change Control Board (FCCB) and is essential to operating the federal EHR, providing DOD, VA and the Department of Homeland Security's U.S. Coast Guard (USCG) functional oversight of all configuration decisions impacting the production baseline.

In Q1 FY2023, the JSaAB approved 344 items; including one daily go-live item that surfaced during DOD Waves JACKSONVILLE/EGLIN go-live, and one item related directly to the COVID-19 response. The FEHRM coordinates an e-JSaAB process for urgent and emergent issue resolution during off-hours, and successfully used it 11 times during Q1 FY2023.

In Q1 FY2023, the JSaAB continued to optimize quarterly updates to approval authority levels to allow for issue resolution and decision making at the lowest level with DOD and VA. This process allows users, sites and government configuration experts and teams to approve JSaAB level activities at a lower level, resulting in a more rapid turn-around and execution of end-user needs. The JSaAB approved and reviewed 32 awareness items and ten catalog reduction requests.

Additionally, the FEHRM manages the Functional Decision Group (FDG), a body of senior clinical, business and health informatics leaders from the VA Electronic Health Record Modernization Integration Office (EHRM-IO), Veterans Health Administration (VHA) and Defense Health Agency (DHA). The FDG reviews, analyzes and makes decisions on critical joint federal EHR issues.

The FDG expanded on an initiative to evaluate proposed DOD and VA configuration change requests for convergence. FDG staff evaluated the possibility of combining Functional Subject Matter Expert (SME) Councils into joint DOD/VA Workgroups. During Q3 FY2022, FDG functional champions approved DOD/VA Federal Oncology Working Group (FOWG) to address joint oncology workflows and therapeutic treatment regimens.

The FEHRM initiated the FOWG with early success in converging high-level oncology regimens while maintaining flexibility for unique protocols (e.g., research) across both Departments. The FEHRM now leads the creation and chartering of another three federal working groups: 1) Federal Rule and Alerts, which manages and strategically reviews rules and alert clinical decision support notifications in the federal EHR; 2) Federal Research, which manages and reviews research related applications and order requests; and 3) Federal FirstNet, which optimizes and improves the emergency medicine and urgent care

application. The FEHRM also chartered the Federal Positions Workgroup in Q1 2023 to jointly review, endorse and standardize positions across DOD and VA.

Joint Functional Requirements

During Q1 FY2023, the Joint Functional Requirements (JFR) team continued to expand on and refine the JFR processes. A combined total of 32 DOD and VA new business need requests were presented to the FDG, where the FDG is the governing body responsible for determining whether new business needs requests are completed in a joint and singular method across the federal EHR. These presentations are the first step in facilitating collaborative discussions on the potential of joint projects in a transparent manner and in an enterprise-wide environment.

The JFR continues to track Individual Longitudinal Exposure Record (ILER) progress as the 11 clinicians' user stories go through the elicitation phase of the requirements development process. The user interface wireframe mockups are also under way.

Federal Configuration Control Board (FCCB)

The FEHRM worked with DOD and VA to federalize and transform existing configuration control board processes. This transformation helped ensure every change to the federal EHR's baseline is rigorously engineered, analyzed and tested. In Q1 FY2023, the FEHRM worked updates to the FCCB charter to capture and accurately describe processes and to codify the Departments' updated representation on the board. The FEHRM introduced a number of process improvements and will continue iterating processes to optimize the effectiveness, reduce risk and improve transparency with stakeholders.

One Interface Team

The federal EHR is leveraged by three Departments, but it does not have a single authority for prioritization and efficiencies of interfaced systems and design options for the interface engine. The absence of a single interface team introduces scenarios for multiple changes performed by multiple teams to a shared component, despite other downstream controls to document changes to the baseline. In Q1 FY2023, the FEHRM continued to formalize the architecture (i.e., documentation of system interfaces), modeling tools and application programming interfaces (APIs). The FEHRM engaged in multiple working sessions with Oracle Cerner to develop a plan to establish an interface catalog (master log of interfaces) and assess current existing interface lists provided by the Departments. In FY2023 and beyond, the FEHRM will develop and finalize the One Interface Team charter and activities to execute the one interface team.

Joint Enclave Data Management

During the Q1 FY2023 reporting period, several ongoing projects addressed different focus areas including Oracle Cerner code sets, terminology and data and analytics governances.

Executive Data Management Board

In Q1 FY2023, the Executive Data Management Board (EDMB), which functions as the formal Data Management and Governance of FEHRM Data Assets, served as the authorizing and prioritizing function for joint data management activities impacting the Federal Enclave. Under the executive body, data and analytics is governed by the Data Governance Board (DGB) and Analytics Governance Board (AGB), respectively. In Q1 FY2023, the FEHRM established and chartered committees under the purview of the DGB and AGB. A few of the committees from the AGB transitioned to the DGB to better align with scope.

Further, the FEHRM established integrated processes and workflows between governance boards with a focus on efficiency, effectiveness and traceability. In support of governance integration, workflows and processes were developed into the FEHRM management solution.

Data Governance

Under the EDMB, data is governed by the DGB with stakeholder representation from constituent bodies. In Q1 FY2023, the FEHRM established and chartered committees under the purview of the DGB to ensure full support of data standards, quality and sharing.

Analytics Governance

Under the EDMB, analytics is governed by the AGB. In Q1 FY2023, the FEHRM established five committees in support of analytic/reporting standards and data warehouse access controls.

Federated Interagency Terminology Service

In Q1 FY2023, the Federated Interagency Terminology Service (FITS), now reporting up to the FEHRM DGB, engaged with the vendor and Departments to jointly review and manage critical terminology projects. Mappings for COVID-19 Lab Tests and Specimen Source are in progress. The FEHRM terminologists also continue to monitor and normalize Joint Longitudinal Viewer (JLV), Clinical Data Repository/Health Data Repository (CHDR) legacy and federal EHR clinical domains including medication status, allergens, medications, laboratory results and document types.

FEHRM Revenue Cycle/Business Processes

During Q1 FY2023, the FERHM/DHA/VHA Workgroup initiated the development of an Interim-State Enterprise Joint Process Map (ISEJPM) that will address inter-departmental DOD to VA referrals executed at VA-operated clinics embedded at Military Treatment Facilities (MTFs). Due to the physical location of the VA clinic inside of an MTF, the standard referral and billing processes via the DOD Managed Care Support Contractor (MCSC) cannot be utilized. This ISEJPM is applicable to certain specialty clinics in Joint Sharing between Naval Hospital Beaufort and Ralph H. Johnson VA Health Care System in Charleston

Veterans Affairs Medical Center (VAMC) and to scenarios where DOD beneficiaries are referred to be seen at a VA clinic physically located within an MTF.

DHA Health Informatics (DHA HI) End User Engagement completed the development of the VA to DOD referral management training artifacts developed by the FEHRM/DHA/VHA Workgroup to support users in the November Revenue Cycle Expansion (RevX) deployment wave and beyond. The workgroup closely collaborating with DHA and VHA Business Functional Champions, DHA Unified Business Office, DOD/VA Sharing Office, VA/DOD Health Affairs Medical Sharing Office, VHA Office of Integrated Veteran Care and VHA Office of Finance and Revenue to identify additional gaps in revenue cycle requirements as they evolve.

Identity, Credential and Access Management (ICAM)

During this reporting period, the FEHRM hosted five sessions to discuss the impacts of ICAM initiatives on the federal EHR with senior leaders from DOD, VA, USCG and private sector partners. The FEHRM assisted technical stakeholders from DOD, VA, and USCG in requesting complexity, feasibility and implementation estimates from private sector partners surrounding the unique federal user identification. DOD received an estimate of $2.3M in September 2022 in response to original requirements provided in July 2022. VA requested net new requirements that are in addition to the original July 2022 requirements. The estimate has yet to be received, however, the anticipation is that the amount will exceed the original estimate received in September 2022. The unique identification is based on a subset of Federal Agency Smart Credential Number, derived from the NIST 800-73-4 standard. This recommended approach provides a shared unique identifier for DOD, VA, USCG and other future federal partners' users.

Implementation Support Joint Sharing Sites (JSS)

In Q1 FY2023, the FEHRM engaged in the planning, execution and analysis activities to support the unique health informatics and operational needs of three identified joint sharing sites impacted by DOD Waves PORTSMOUTH/DRUM. The FEHRM identified three critical areas (operational, clinical and business) that would require further dialogues with these sites and actively worked with interagency partners (DOD Healthcare Management System Modernization [DHMSM] and EHRM-IO Program Management Offices [PMOs]) to put interim solutions in place until both agencies complete their EHR modernization efforts.

More specifically, the FEHRM, alongside its DHA (clinical and business) and VHA Office of Health Informatics partners, evaluated the nature of the shared clinical services at three JSS: 1) Naval Medical Center Portsmouth; 2) 633rd Medical Group (MDG), Joint Base Langley/Eustis with their sharing partner Hampton VAMC; and 3) Keller Army Community Hospital with their sharing partner Montrose VAMC in DOD Waves PORTSMOUTH/DRUM to identify potential risks due to the asynchronous deployment schedule. Early in November

2022, an assessment was conducted to determine the number of VA clinical and administrative staff who currently access the DOD legacy EHR systems to 1) document care and order ancillary services for both DOD beneficiaries and Veterans at these sites, or 2) extract medical record data in support of Veterans' disability determination processes. The FEHRM identified risks and developed a mitigation strategy in coordination with DHA HI and the Joint Resource Services Assessment Office through active engagement of these joint sharing facilities and DOD/VA PMOs.

The FEHRM continues with its effort of bringing together DOD and VA stakeholders, as well as vendors Oracle Cerner and Leidos Partnership for Defense Health, to evaluate Enterprise Patient Care Location (PCL) decision-making processes and their impact to EHR deployment at JSS as part of the FEHRM Risks, Issues, Opportunities (RIO) process. More specifically, based on the challenges experienced at Navy Hospital Beaufort and Naval Health Clinic Charleston (Waves JACKSONVILLE/EGLIN), executive leadership representing the FEHRM, both EHRM PMOs and DHA HI, agreed to establish an Enterprise PCL Working Group in September 2022 to establish a standardized and consistent process to support PCL decisions at JSS. Additionally, the Enterprise PCL Working Group must also determine the best approach to reassess and fix multiple JSS impacted by previous DOD PCL decisions.

Since the last reporting period, the FEHRM examined the latest projected VA EHRM-IO deployment schedule and identified that JSS will require FEHRM support to mitigate risks ahead of the "end-state" transition (in which both DOD and VA sites deployed on Oracle Cerner platform). The 88th MDG, Wright-Patterson and Dayton VAMC will be the first JSS to transition from the interim to end-state on September 16, 2023. The immediate concern is that there is a three-month gap between the interim state and end state, and several interoperability shortfalls that must be addressed prior to these JSS reaching end state: 1) user roles and access; 2) training/user adoption; 3) patient care location; 4) data migration/cut-over plan; 5) trouble ticket management; and 6) policy.

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

The FEHRM continued collaboration with EHRM-IO and DHMSM PMO to significantly progress the Lovell FHCC Enterprise Requirements Adjudication (ERA) process. At the end of Q1 FY2023, all except for two of the 69 ERA topics identified received a recommended course of action (COA) from the Departments' key stakeholders. The FEHRM finalized the topics that inform the Lovell FHCC Federal EHR Implementation Plan, and included those that required a decision on the execution, or approach, for the deployment. The FEHRM also finalized the topics that inform the federal EHR baseline design to be implemented at Lovell FHCC, which will be available to other JSS. Moreover, the FEHRM, working with EHRM-IO and DHMSM PMOs, coordinated the completion of respective "EHRM-IO Oracle-Cerner Current State Review (CSR)" and DHA HI "Current State Workflow Assessment" for Mass Readiness at Lovell FHCC in preparation for the vendor's Implementation Plan development.

Additionally, in Q1 FY2023, the FEHRM established targeted working groups, with representatives from EHRM-IO and DHMSM PMO, focused on contracting and scheduling in support of the implementation. The contracting working group is leading the efforts to identify required contracting actions in support of the Lovell FHCC deployment, develop necessary documentation and maintain close coordination between the Departments for contracting-related activities. With the support of the scheduling working group, the FEHRM is leading the effort to establish and maintain an Integrated Master Schedule (IMS) to deliver the federal EHR to Lovell FHCC. The FEHRM developed an initial draft schedule in Q1 FY2023 and expects to publish the approved Lovell FHCC baseline IMS in early Q2 FY2023. Additional working groups with other focus areas will also be established in Q2 FY2023.

The FEHRM continues 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.

The FEHRM continues to partner with local Lovell FHCC IT to ensure end-user training and a deeper understanding of the federal EHR, leading to ease of use. The FEHRM also continues to assist local IT with understanding and communication with respect to ports/switch/outlet surveys, network infrastructure upgrades and other deployment-related activity.

Lovell FHCC Federal EHR Implementation Sustainment

As defined in the Program Executive Office, Defense Healthcare Management Systems (PEO DHMS) Transition Agreement dated December 5, 2022, the FEHRM assumes responsibility for joint HIE, JLV and Lovell FHCC legacy system sustainment. The HIE, JLV and Lovell FHCC capabilities funding requirements remain tied to the Enterprise Intelligence & Data Solutions Program Element within PEO DHMS.

The JSS Lovell FHCC Sustainment Team is aligned under the JSS-Lovell FHCC 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, Medical Single Sign On-Context Management and associated Test and Evaluation and Cybersecurity activities in coordination with Lovell FHCC, DOD, VA and others. Below includes a description of each Solution and key accomplishments for Q1 FY2023.

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

The MSSO-CM system allows users (authorized government, military and contractor personnel) to interoperate seamlessly and securely among clinical applications (Armed Forces Health Longitudinal Technology Application [AHLTA], Composite Health Care System [CHCS], Veterans Health Information Systems and Technology Architecture [VistA] and Computerized Patient Record System [CPRS]). The MSSO-CM 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. This automates 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.

Enterprise Service Bus/Orders Portability (ESB/ORP)

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

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

Key accomplishments include planning and developing the IMS for the Imprivata OneSign 7.10 G4 Appliance Upgrade and Testing and installing monthly Information Assurance.

Federal EHR Operations

Enterprise Operations Center (EOC)

The EOC is critical to operationalize the FEHRM. The EOC prepares federal EHR system partners and ecosystem colleagues for the intense schedule of go-live activities. The EOC supports cross-organizational collaboration and executive-level reporting on the Federal Enclave and ecosystem during federal go-live events. During Q1 FY2023, in addition to monitoring planned activities that could impact FEHRM partners, the EOC monitored and reported 36 unplanned incidents impacting the federal EHR or partners. These reports included root cause analyses, when known, and corrective actions taken for unplanned incidents. The EOC 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 expanding and enriching stakeholder engagements.

Continuity of Business Operations

Currently, providers rely on the federal EHR to document and support the care of more than 5.6 million DOD, VA and USCG patients—a number that grows as the federal EHR deploys to more sites. Given the criticality of this mission, the FEHRM works with EHRM-IO, PEO DHMS and commercial partners to ensure patients and providers can rely on the federal EHR in the unlikely event the primary data center suffers a catastrophic disaster through the design

and implementation of comprehensive Continuity of Operations Program (COOP) and Disaster Recovery solutions. In Q1 FY2023, the FEHRM continued tracking progress of expanding COOP capabilities through the addition of replicated High Availability, Commercial Application Systems in the COOP domain. In Q1 2023, the FEHRM prepared for the annual COOP Test Plan and Tabletop Exercise scheduled for Q2 FY2023; this is an annual requirement within the COOP Program.

Federal Enclave Management

The FEHRM drove regular enterprise technical activities, including Enterprise Technical sessions, Enterprise Technical/Functional sessions with clinical leaders, Technical/Programmatic sessions, Environment Management Operations Center (EMOC) sessions and EMOC-Cyber sessions. These activities focused on the Federal Enclave, in partnership with DOD, VA and USCG; vendors; and key stakeholders responsible for segments of the federal EHR ecosystem. In Q1 FY2023, those activities included Information Models and Data Standards, Scalability Follow-Up, and an out brief from FHCC Analyses.

In Q1 FY2023, the FEHRM continued working with stakeholders to track Federal Enclave measures included in the DOD-VA Interoperability Modernization Strategy. The FEHRM attended monthly Oracle Cerner technical syncs focused on the Federal Enclave and reviewed shared metrics of service availability and performance trends. The FEHRM also tracked progress toward cloud migration and deployment growth at Federal EHR Cloud Architecture Strategy Working Group sessions. In support of the FEHRM DOD/VA Interoperability Modernization Strategy objective to enhance the delivery and experience of care, the FEHRM reviewed key performance metrics and data-driven initiatives with Oracle Cerner to decrease system degradation and improve enclave stability.

The FEHRM works with DOD and VA to actively manage the domains comprising the Federal Enclave to meet the needs of the agencies using the federal EHR. During Q1 FY2023, the FEHRM disseminated the "FEHRM Domain Execution Management Guide" to its federal partners, to include DHMSM, VA EHRM-IO, USCG, DHA/J-6, VA Office of Information Technology (OIT) and others. The guide describes the comprehensive and repeatable process to conduct domain management for the federal EHR.

Federal Software Release Management

In Q1 FY2023, the FEHRM facilitated the transformation of the Joint Release Working Group into the Federal Release Working Group (FRWG). The FEHRM's Chief Systems Engineer took on shared leadership of the FRWG and provided FEHRM program management assets to assist with release management operations. The FEHRM took responsibility for memorandums for information generation to document each FRWG meeting, information dissemination and distribution management. The FEHRM's federal support ensured that the FRWG had the resources needed to take on its expanded federal role.

Federal EHR Cybersecurity

Cybersecurity – Cyber Tabletop

Consistent with the direction contained in Executive Order 14028, the FEHRM is undertaking a series of focused cyber tabletop (CTT) exercises to evolve the cybersecurity posture of the federal EHR to include prevention, detection, escalation and response coordination. The FEHRM is planning a series of CTTs for FY2023 with the objectives of strengthening Federal Enclave security, joint communications and information sharing.

Cybersecurity – Joint Incident Management Framework

Foundational to the cybersecurity posture of the federal EHR is documenting and optimizing a framework for jointly responding to cybersecurity incidents. In Q1 FY2023, the FEHRM finalized the standard operating procedures document for joint cyber incident response, escalation, roles and responsibilities; management; and reporting. For FY2023, efforts continue with engaging stakeholders to ensure consistent incident management and reporting procedures are in place across the Federal Enclave for joint communications, information sharing and situational awareness.

Cybersecurity Risk Mitigation

Consistent with its charter to orchestrate the joint cybersecurity program, the FEHRM continues to actively address cybersecurity risks to the Federal Enclave, as well as include the guidance contained in the White House Executive Order on Improving the Nation's Cybersecurity (May 12, 2021), to improve investigative and remediation capabilities. The FEHRM continues to monitor and analyze the evolution from the current defense in depth to a zero trust architecture. This activity includes evaluating methods to consolidate incident response and management information to ensure a coordinated effort to report, remedy and mitigate risks across the Federal Enclave.

In Q1 FY2023, the FEHRM drafted a Coordinated Interagency Data Sharing White Paper and Strategy to provide FEHRM project leaders insight into the current and planned cyber activities, and provide the rationale and guidance for composing a joint Memorandum of Understanding (MOU) around Data Sharing. In addition, the FEHRM is working with stakeholders to plan and conduct a red team exercise in FY2023 to ensure vulnerabilities are identified, mitigated and remediated, and that management, technical and operational security control implementations are improved.

Interoperability Modernization

Joint Health Information Exchange (HIE)

DOD and VA deployed the joint HIE in April 2020, enhancing the ability of DOD, VA and USCG staff to bi-directionally exchange Service member, Veteran and other beneficiary health care data securely with community providers for purposes of treatment. The joint HIE connects to more than 65% of U.S. health care providers and facilities, most recently delivering thirteen (13) million documents to community partners and retrieving as many as 102 million documents from community partners every month. Future efforts include continuing expansion with community partners and external networks (Carequality) and further implementing a geographical map representation of all joint HIE partners/connections (Joint HIE Interoperability Map).

HealtheIntent

HealtheRegistries

VA released toxic exposure screening measures in Q1 FY2023, meeting the *Sergeant First Class Health Robinson Honoring our Promise to Address Comprehensive Toxics Act of 2022* (*PACT Act*) guidelines.

The FEHRM initiated the organizational build to extend the HealtheRegistries solution to DOD nurses across the Military Health System (MHS) as well as the already live DOD physician users. Projected completion is targeted for the Q2 FY2023; effectively expanding the user base.

The FEHRM addressed immediate issues with solution features and completed reconfiguration of targeted measures. The PMOs are following up on architecture elements with the vendor to ensure performance is adequate when the solution scales.

HealtheAnalytics

The FEHRM completed the Data Model Builder enhancement in Q1 FY2023.

The FEHRM established the Tableau Server application Security Assertion Markup Language gateway for DOD and VA data authors and administrators. This update removed username and password authentication, and established an additional working multifactor authentication in the HealtheIntent Federal Tenant.

Military Service Exposures and the Electronic Health Record

In the course of their military careers, Service members may be exposed to a range of chemical, physical and other hazards associated with their occupations and surrounding environment. These exposures—and their subsequent health consequences—are the subject

of national discussion, and the incorporation of exposure information into Service members' health records has been included in recent legislation:

- Inclusion of blast exposure history in medical records of Service members (National Defense Authorization Act for Fiscal Year 2020 [NDAA FY2020] §717)

- Inclusion of exposure to open burn pits in post-deployment health assessments (NDAA FY2021 §721)

- Enhancement of record-keeping for exposures to occupational and environmental hazards while deployed overseas (NDAA FY2020 §705)

President Biden signed the *PACT Act* in August 2022. The *PACT Act* expands benefits and services for Veterans with toxic exposures through numerous provisions, including the expansion of medical conditions with presumed connection to military service, establishment of a $500 million toxic exposure fund and creation of a Toxic Exposure Research Work Group to organize and oversee exposure-related research. Several provisions of the *PACT Act* will have direct and indirect effects on the federal EHR and ILER— a novel information technology (IT) system that correlates occupational and environmental exposures with individual Service members based on their work history and geographic proximity to known exposure events.

The FEHRM maintains several lines of effort focused on advancing the interoperability of exposure information and incorporation of exposure information into the common federal EHR.

- **Clinical Functional Requirements for Use of Exposure Information in the Federal EHR**
  Incorporation of exposure information into individual health records has the potential to improve care for individual Service members and Veterans by driving adherence to clinical practice guidelines for the monitoring and care of specific exposures. Combining exposure history with clinical data and modern analytic tools has the potential to advance the understanding and management of exposure-related illness. The FEHRM convened a work group of clinicians and exposure authorities to develop functional requirements for the presentation and clinical use of exposure-related data in the federal EHR. The requirements were presented to the DHMSM PMO in October 2022 and subsequently moved to a "collaborative discovery" phase with the federal EHR vendor team. The vendor team is analyzing the requirements and anticipates presenting a proposal for their implementation during Q2 FY2023.

- **Delivery of the Individual Exposure Summary to Clinicians and Veterans**
  ILER's principal product is the Individual Exposure Summary (IES), a listing of potential occupational and environmental exposures sustained by an individual Service member. The FEHRM coordinated the delivery of the IES to clinicians via a

PDF file in the JLV and is now involved in the planning phase for delivery of the IES directly to Veterans via a website.

- **Honoring the *PACT Act***
  The *PACT Act* expands VA health care and benefits to Veterans exposed to open burn pits, Agent Orange and other toxic substances. The FEHRM conducted a detailed analysis of the *Pact Act* to identify direct and indirect impacts on the federal EHR and ILER. This analysis will guide the development and prioritization of FEHRM activities related to the implementation of the *PACT Act's* provisions.

- **National Standards for Exposure Exchange**
  At present, the names of military service-related exposures are not standardized. The lack of standardization impairs the exchange of exposure information between IT systems, makes it difficult to implement clinical decision support for specific exposures and research efforts that require aggregating individuals with similar exposures. The FEHRM leads 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 "U.S. Public Health Contact Information," which can serve as the basis for the exchange of an exposure. Another effort is analyzing the Systematized Nomenclature of Medicine to understand how it may be expanded to encode concepts related to exposures. The FEHRM will continue to collaborate with the Office of the National Coordinator for Health Information Technology (ONC) and the Departments to advance these efforts for all federal partners involved in exposure-related clinical care and research.

Enterprise Reporting and Performance Measurement

One of the most important and anticipated benefits of the federal EHR is the convergence of clinical information for multiple federal organizations into one electronic system. The Health Data Interoperability (HDI) Dashboard displays key metrics that describe and trend progress toward increased levels of inter-organizational interoperability. Metrics are divided into four categories—Department Integration, Community Partnerships, Patient Engagement—and a new category added in Q1 FY2023: Federal Partner Onboarding. The new chart displays the progress of collaborations with new federal partners who are interested in joining the federal EHR enterprise. Another refinement includes the retirement of the CHDR Clinical Data Update Success Rate metric since the overall insight provided by the metric was limited. The current HDI metrics are presented and discussed in Appendix A. The FEHRM continues to review new and existing measures for presentation on the Dashboard in future quarters.

Standards Development and Adoption

A successful interoperability ecosystem enables information sharing across organizational boundaries to advance the effective delivery of health care for individuals and communities. Accordingly, NDAA FY2020 contained several directives for the FEHRM to encourage the development and adoption of national standards for data encoding and formatting. Specifically, the legislation directed the prioritization of open systems architectures and maximization of the use of open APIs, including HL7 FHIR. The legislation directed the FEHRM to actively engage with national and international health standards development organizations (SDOs) to support the establishment of standards that meet the needs of the Departments and to oversee the adoption of and mapping to such standards by the Departments. Below are the initiatives and activities anchored to the FEHRM's mission as it fulfills these requirements.

FEHRM and Department-Led Groups

- **FEHRM Standards Stakeholder Group**
  The FEHRM plans, manages and hosts monthly Standards Stakeholder Group meetings to share the national and international standards landscape with the Departments and key stakeholders. The Standards Stakeholder Group meeting is a venue to promote standards released by HL7, the International Organization for Standardization (ISO) and the Institute of Electrical and Electronics Engineers (IEEE) Workgroup. The FEHRM also presents the FHIR development and trends in a variety of clinical and health domains, such as patient-contributed data and social determinants of health and telehealth. The FEHRM also publishes industry trending material to inform stakeholders on the development and adoption of standards.

- **VA Interoperability Leadership (VAIL) Internal and External Federal and Standards Coordination Working Group**
  The VAIL Working Group monitors industry standards as they progress through development, adoption and implementation and evaluates the maturity of standards within VA. During this reporting period, the FEHRM provided monthly updates related to data standards that impacted the deployment of electronic health records.

Health Level 7 (HL7)

HL7 is an 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 industry needs. The FEHRM engages with HL7 through numerous mechanisms and forums, including:

- **HL7 Balloting**
  Balloting is the formal process that HL7 uses to get feedback and comments on specifications prior to publication. For the September 2022 HL7 ballot cycle that ended in October 2022, the FEHRM prioritized eight standards for analysis and voting, including standards on National Directories, Patient Contributed Data, Personal Functioning and Engagement and Pharmacy Templates, which have a direct impact on interoperability between DOD and VA. The FEHRM and VA submitted votes and comments to HL7 prior to closing the ballot cycle. The ballot cycle evaluation report was completed and distributed to FEHRM leadership in October 2022.

- **HL7 Government Birds of a Feather**
  During this reporting period, the FEHRM planned for the upcoming January 2023 HL7 Government Birds of a Feather. The meeting will feature presentations from the Centers for Medicare & Medicaid Services (CMS) on policies that influence patient-centric standards and ONC, as well as informal updates from participants from other federal departments and agencies. The FEHRM expects attendees from several federal departments/agencies, as well as state agencies, international consultants, insurance associations and industry groups.

- **HL7 Working Groups**
  HL7 Working Group meetings allow federal agencies, stakeholders and the HL7 community to work on standards and network with global industry leaders. Attendance allows SMEs to provide perspectives on current trends and initiatives; remain current on standards activities and ballots; and influence ballots and policy outcomes through contributions to working sessions. During Q1 FY2023, the FEHRM engaged with, co-chaired or led the following HL7 workstreams with the areas of focus noted below:

  - **Consolidated CDA (C-CDA) Product Management**
    The FEHRM led design discussions on all data classes in ONC's US Core Data for Interoperability (USCDI) v3. The design sessions included more than 20 industry representatives, government liaisons and ONC participants. The team resolved 12 new implementer-reported issues and developed designs for Health Insurance Information, Health Status Assessments, Laboratory, Medications, Patient Demographics (including Gender Identity) and Procedures. In partnership with HL7 and ONC, the FEHRM hosted weekly calls to review and refine the proposed designs. These designs are included in the C-CDA Companion Guide R3 January 2023 ballot, which is expected to be the future required document exchange standard for all joint HIE trading partners.

    The FEHRM presented to the VHA FHIR Community of Practice (CoP) on the USCDI and its relationship to critical standards, including FHIR and C-CDA. The invitation is a result of the ongoing collaboration between the FEHRM and VHA

to advance Interoperability through expert analysis, guidance and knowledge sharing. Seventy-five participants attended, representing diverse organizations, such as VA OIT, Office of Connected Care, and VHA; health standards stakeholders; DOD; FEHRM; Oracle Cerner; and FHIR developers.

– **Da Vinci**
In support of a better way to compensate for improved outcomes, CMS issued guidance to advance the adoption of value-based care strategies across health care systems to align provider incentives across payers. The goal of the Da Vinci project is to help payers and providers positively impact clinical, quality, cost and care management outcomes. The FEHRM participated in work groups and analyzed documents for Clinical Data Exchange; Payer Data Exchange; Coverage Requirements Discovery; Documentation, Templates and Rules; Prior Authorization Support; Patient Cost Transparency; and Member Attribution Lists.

– **Gender Harmony**
HL7 is developing standards to improve data accuracy for sex and gender information in health IT systems by changing the single code currently used to capture both sex and gender to using multiple codes that reflect the different definitions recently developed for sex and gender. The FEHRM leveraged its participation in the Vocabulary Work Group sessions to review and comment on the Sex and Gender Representation ballot during the September and October 2022 ballot cycles.

– **Gravity Project (Social Determinants of Health [SDOH])**
The FEHRM provided input in the development of use cases for the closed-loop referral process related to SDOH services. This referral process allows health care professionals to send patient information to a community-based organization to help address a patient's needs that are typically better served outside of clinical workflows

– **Mobile Health Work Group**
The FEHRM collaborates with the Mobile Health Work Group in its development of a Unique Mobile Health Application Identifier to help establish the provenance of data shared with EHRs and other health IT.

– **Payer-Provider Exchange (PIE) Work Group**
The mission of the PIE Work Group is to convene and coordinate payers, health plans, consumers, providers and other organizations (e.g., Accountable Care Organizations, Health Information Exchanges) to improve the administrative and clinical exchange of information. As a co-chair of the PIE Work Group, the FEHRM coordinates reviews of the implementation guides

based on CDA Release 2.0, which is one of the most prominent ways to share electronic health information.

– **Post-Acute Care Interoperability (PACIO) Initiative**
The FEHRM supports the PACIO Initiative as it facilitates improved transitions of care between health care settings and advocates for wider use of advanced directives. The FEHRM supported a number of work group meetings focused on creating, exchanging, querying, retrieving and updating Portable Medical Orders for Life-Sustaining Treatment forms.

Institute of Electrical and Electronics Engineers (IEEE)

IEEE is a leading developer of industry standards in a broad range of technologies that drive functionality, capabilities and interoperability. The FEHRM leads the Departments in standardizing data exchanges between medical/mobile-health devices and health information systems (e.g., the federal EHR) by contributing to the development of conceptual frameworks and standards and sharing standards information. Notable activities for Q1 FY2023 include:

- **IEEE Life Sciences and Technical Community**
  The FEHRM collaborated with IEEE Life Sciences and Technical Community members to promote telehealth equity.

- **IEEE P2933 Clinical Internet of Things Workgroup**
  The FEHRM provided updates to the workgroup as they coordinated the Clinical Internet of Things standard for consistency and adherence to IEEE and ISO drafting principles and finalized the linkages among the TIPPSS principles (Trust, Identity, Privacy, Protection, Safety, Security).

- **IEEE Public Health (PH) Emergency Preparedness and Response and PH Reporting**
  The FEHRM met with members of the IEEE PH Emergency Preparedness and Response and PH Reporting workgroup to explore how the FEHRM Standards Group could participate and support the review and development of data standards related to public health emergency preparedness and reporting.

U.S. Department of Health and Human Services (HHS)

The FEHRM collaborates with HHS agencies to advance health care interoperability. Its support of CMS, ONC and the Workgroup for Electronic Data Interchange (WEDI) are provided below.

Centers for Medicare & Medicaid Services (CMS)

In 2023, CMS plans to release policies to advance nationwide health information exchange, reduce the administrative burden for providers and incentivize effective use of health IT in

2023 and beyond. CMS is incentivizing the health information exchange under the Trusted Exchange Framework and Common Agreement (TEFCA). TEFCA is anticipated to be a strong catalyst for the maturation of FHIR and many other standards. During Q1 FY2023, the FEHRM reviewed CMS regulations, such as the Advancing Interoperability and Improving Prior Authorization Processes Proposed Rule, which includes requiring implementation of HL7 FHIR API to support electronic prior authorization.

Office of the National Coordinator for Health Information Technology (ONC)

ONC is a leading resource to support the adoption of health IT and promote standards-based health information exchange. During the reporting period, the FEHRM collaborated with ONC stakeholders to further the progress of national and international interoperability standards and the quality of health information exchange required by the Departments by engaging with the following entities:

- **Adopted Standards Task Force**
  The Adopted Standards Task Force reviews the existing set of ONC-adopted standards and implementation specifications and makes recommendations to maintain or phase out such standards and implementation specifications, as required by 42 U.S. Code § 300jj–13 (Setting priorities for standards adoption). The FEHRM analyzed the proceedings of eight meetings of the Adopted Standards Task Force, which included discussions of the FHIR US Core Implementation Guide, HL7 FHIR Bulk Data Access Race, Ethnicity Code Sets, Syndromic Surveillance and Gender Harmony Code Sets.

- **Federal Health IT Advisory Committee (HITAC) and Annual Report Workgroup**
  HITAC submits recommendations on ONC policies, standards, implementation specifications and certification criteria relating to the implementation of a health IT infrastructure, nationally and locally, that advances the electronic access, exchange and use of health information. In Q1 FY2023, the FEHRM participated in the HITAC and Annual Report Workgroup meetings to provide comments and input regarding the Annual Report and shared updates with stakeholders.

- **Federal Health IT Coordinating Council (FHIT CC) and Digital Health Innovation (DHI) Work Group**
  ONC improves federal coordination through the FHIT CC, a voluntary group of nearly 40 federal departments, agencies and offices actively involved in implementing the national health IT agenda. The FHIT CC convenes monthly to influence and discuss FHIR Guidance for federal partners, supports efforts to update the USCDI, shares federal progress made toward the 2020-2025 Federal Health IT Strategic Plan and assists in federal health IT coordination activities related to COVID-19.

- **Interoperability Standards Advisory**
  The intent of the Interoperability Standards Advisory (ISA) process is to provide the health care industry with a model to identify, assess and determine interoperability standards and implement specifications for industry use to fulfill specific clinical health IT interoperability needs. The FEHRM analyzed standards presented in the ISA, including Social, Psychological and Behavioral Data; SDOH such as food, transportation and housing insecurity; provenance; security tags; unique device identifiers; prior authorization; and claims status.

  The FEHRM coordinated formal review of the 2023 ONC ISA between DOD, VA and internal FEHRM SMEs and submitted feedback on the initial draft in October 2022. The FEHRM also provided comments during the courtesy federal review of the final ISA Reference Edition in December 2022.

- **United States Core Data for Interoperability (USCDI) and Data Strategy and Standards Harmonization Workgroup**
  The USCDI and Data Strategy and Standards Harmonization Workgroup reviewed and made recommendations on the draft USCDI version 3 content and process. The FEHRM provides input regarding USCDI data classes and elements related to the VA ecosystem and suggests priorities for the USCDI version 4 submission cycle.

- **Social Determinants of Health (SDOH) Information Exchange Learning Forum**
  The SDOH Information Exchange Learning Forum brings together health care providers, community-based organizations, government, payers, health information exchange networks, IT platform developers, innovators and other partners to share lessons learned, promising practices and challenges related to exchanging SDOH data. The FEHRM provides input to the SDOH Information Exchange Learning Forum on issues relevant to DOD and VA communities.

- **Trusted Exchange Framework and Common Agreement Recognized Coordinating Entity (TEFCA RCE) Informational Calls**
  The TEFCA RCE coordinates the development of TEFCA that supports advancing nationwide interoperability of electronic health information.[1] The FEHRM monitors the calls, analyzes documents and provides comments on language that furthers the advancement of the common agreement.

---

[1] TEFCA was developed by ONC under Title IV of the 21st Century Cures Act. The Act calls for the development of a "trusted exchange framework" that includes a national, common agreement among health information networks.

Workgroup for Electronic Data Interchange (WEDI)

WEDI is recognized and trusted as a formal advisor to the Secretary of HHS. Its main mission is to advance standards for electronic administrative transactions and promote data privacy and security. WEDI successfully influenced health IT policy and aligned the industry to harmonize administrative and clinical data. WEDI focuses on many areas, including data standards and compliance; interoperability and data sharing; and value-based reimbursement models implementation. The FEHRM joins discussions at numerous WEDI forums and monthly seminars. In December 2022, the FEHRM attended the WEDI panel discussion on the CMS Proposed Rule on Prior Authorization in preparation for the upcoming public comment period.

FEHRM-Facilitated Engagements

The FEHRM facilitates numerous meetings to increase awareness and encourage engagement of its federal and industry partners. During Q1 FY2023, the FEHRM facilitated the engagements that follow.

FEHRM Industry Roundtable

The FEHRM hosted its 13th semi-annual Industry Roundtable on November 16, 2022. This roundtable consisted of two panel discussions on change management in the EHR ecosystem. The first panel was composed of senior leadership from the FEHRM, DOD, VA EHRM-IO, DHMSM, USCG and ONC. The second panel consisted of the MHS GENESIS Clinical Functional Champion and technical experts from DHMSM, VA EHRM-IO, USCG and Oracle Cerner. ONC and the CMS also presented program updates. More than 200 federal and industry personnel participated representing 62 industry and 20 federal organizations. The next roundtable is planned for May 2023.

FEHRM-ONC-CMS Joint Coordination Meetings

On November 1, 2022, the FEHRM hosted a joint coordination meeting with ONC and CMS to share alignment across the federal government in health IT. This meeting consisted of updates on recent and upcoming events; project and program initiatives; new publications; and pending documents for future FEHRM and departmental review and feedback.

FEHRM Town Hall

The FEHRM hosted its quarterly Town Hall on December 8, 2022, which provided a professional forum for federal partners to discuss current and emerging thinking on federal EHR issues to advance interoperability. The Town Hall focused on the *PACT Act* and ILER. ONC and CMS also shared updates on current and upcoming engagements and initiatives. Attendance included more than 80 participants representing multiple federal agencies.

User Engagement and Assessments

Federal EHR Annual Summit

During Q1 FY2023, the FEHRM convened the second annual Federal EHR Annual Summit of clinical staff from DOD, VA and USCG; private sector partners; and other leading clinical experts to assess the use of the federal EHR. Participants engaged in valuable discussions on opportunities for enhancing the federal EHR to better serve Service members, Veterans and other beneficiaries. The summit allowed end users to provide valuable feedback to FEHRM, DOD and VA leadership.

More than 700 individuals registered for the two- and half-day event, including congressional staffers and the VA Office of Inspector General. The feedback received produced more than 390 items in the form of questions and comments, as well as 92 actionable items for follow up with DHA and VHA Solution Owners and Experts to determine if change requests are required to enhance the experience of the EHR, or if there are already enhancement requests tickets available, to match/tie the action items to the identified enhancement requests.

During Q1 FY2023, the FEHRM continued its work with the training and configuration teams of DHA HI/DHMSM and VHA/VA EHRM-IO to mitigate, solve or highlight training items identified during the summit.

FEHRM Testing and Evaluation Initiatives

The FEHRM focused on two key areas to mitigate risks to the federal EHR. The first, a partnership with MITRE to verify the federal EHR adheres to the interoperability performance standards outlined in NDAA 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 Q1 FY2023, the FEHRM continued the foundational work required by NDAA FY2020 to assess whether DOD and VA clinicians are able 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). The FEHRM worked with MITRE to develop the Federal EHR Interoperability NDAA FY2020 Independent Assessment Execution Procedure. The purpose of this Independent Assessment Execution Procedure is to detail the execution activities required to assess interoperability of the federal EHR as identified by the NDAA Use Cases. This plan defines the scope of the execution and its phases, roles and responsibilities, and a detailed approach to carry out the assessment and analyze the findings. Execution of this plan will inform the NDAA FY2020 Final Independent Assessment Report to Congress.

The FEHRM continues to implement technical controls for the test/pseudo patients. The Federal Identity Management Test Patient Committee transitioned the ongoing administrative and governance responsibilities to the DGB to control the creation and use of test/pseudo records being collocated in the Federal Enclave.

Clinical and Patient Use and Satisfaction

During the reporting period, the FEHRM continued to collaborate with DOD and VA patient and clinician satisfaction SMEs and Joint Work Groups (JWG), which previously established the common instruments and methodologies to survey and measure clinical and patient use and satisfaction with the federal EHR. FEHRM received results during Q1 FY2023 for both clinician and patient satisfaction surveys and is working with the JWG to analyze and report results with Department representatives. The FEHRM started this collaborative effort to equally assess satisfaction across DOD and VA, save government resources and reduce overall costs. Through these efforts, the survey instruments established and used for both 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.

The FEHRM collectively selected and successfully incorporated the Joint EHR Patient Satisfaction item sets (CAHPS-HIT) into the Q3 FY2021 surveys for DOD and VA. Survey deployment to VA sites with the federal EHR was slightly delayed due to integration and deployment of the federal EHR, and receipt of data began during Q2 FY2022. The FEHRM analyzed the longitudinal data for both DOD and VA and reviewed the results with the JWG for the entire FY2022.

DOD and VA executed the Joint EHR Clinician Satisfaction Survey (KLAS) question set in Q4 FY2022. The jointly established questions were deployed across DOD, VA and USCG. The KLAS Arch Collaborative provides benchmark data from other Oracle Cerner clients across the U.S. and abroad. The data and results will be reviewed by the JWG and analyzed for shared trends between DOD, VA and USCG in Q2 FY2023.

Federal and Industry Stakeholder Engagements

In keeping with the FEHRM's charter to advance interoperability across the federal and private sectors, the FEHRM collaborates with federal and private organizations that develop policies, provide guidance regarding standards and advance the development of health information technologies. The FEHRM monitors and analyzes publications from federal agencies; meets with their staff to share knowledge and provide input; and informs internal leaders of significant developments that may affect the deployment of the federal EHR.

Through various events, the FEHRM collaborates with CMS, HHS, ONC and other federal employees to collaborate, learn and elevate new ideas in health care interoperability and IT modernization. In Q1 FY2023, the FEHRM participated in the Interoperability and Standards

Collaborative Forum in October 2022 (The Future of Public Health and Data Lakes with Amazon Web Services) and November 2022 (The Rx for the Future of Pharmacy Standards).

The FEHRM continues its collaboration with professional societies and associations to foster partnerships, support health care data exchange and promote interoperability modernization. In Q1 FY2023, the FEHRM engaged with the Healthcare Information and Management Systems Society (HIMSS) through numerous National Capital Area (HIMSS NCA) Chapter events. It also authored an e-news article for the American Medical Informatics Association (AMIA), highlighting the FEHRM's Federal EHR Annual Summit.

Federal EHR Partner Onboarding

National Oceanic and Atmospheric Administration (NOAA)

NOAA is a division of the Department of Commerce that is charged with understanding and predicting changes in climate, weather, oceans and coasts—and sharing that knowledge with others. NOAA's health care operations focus on the delivery of occupational health, safety and readiness services to all staff, including 321 NOAA Commissioned Officers. NOAA, with guidance from the FEHRM, is finalizing plans to deploy the federal EHR, with an anticipated go-live date in Summer 2023.

Conclusion

Throughout Q1 FY2023, the Departments remained committed to measuring, assessing and enhancing health data interoperability with the single, common federal EHR as well as with their private sector partners who care for DOD, VA and USCG beneficiaries. Enabling health information exchange between DOD, VA, USCG and the private sector serves as the foundation for a patient-centric health care experience, seamless care transitions and improved care for Service members, Veterans and their families. To demonstrate the effect on patients and providers as DOD, VA and USCG move forward with their implementation of a seamless EHR system, the FEHRM will monitor and report data sharing between the Departments as part of its broader support of the Departments' commitment to advance HDI through interoperability modernization strategic planning.

Appendix A: HDI Metrics Details

HDI Metrics Details: Throughout Q1 FY2023, 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: (a) Department Integration, (b) Community Partnerships, (c) Patient Engagement and (d) Federal Partner Onboarding. Figure 1 represents a snapshot of the Q1 FY2023 HDI Metrics Dashboard.

Figure 1 – Q1 FY2023 HDI Metrics Dashboard

Q1 FY2023 Highlights: Metric highlights are captured in Table 1 below.

Table 1 – Quarter Highlights

Metrics	Highlights
Federal Partner Onboarding	Federal partner interest in joining the EHR continues to grow -- National Oceanic and Atmospheric Administration (NOAA) Go Live anticipated for Q3 FY2023

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 civilian partners within a single application. JLV retrieves clinical data from numerous native data sources and systems, displayed in Figure 2.

Figure 2 - JLV Data Sources and Systems
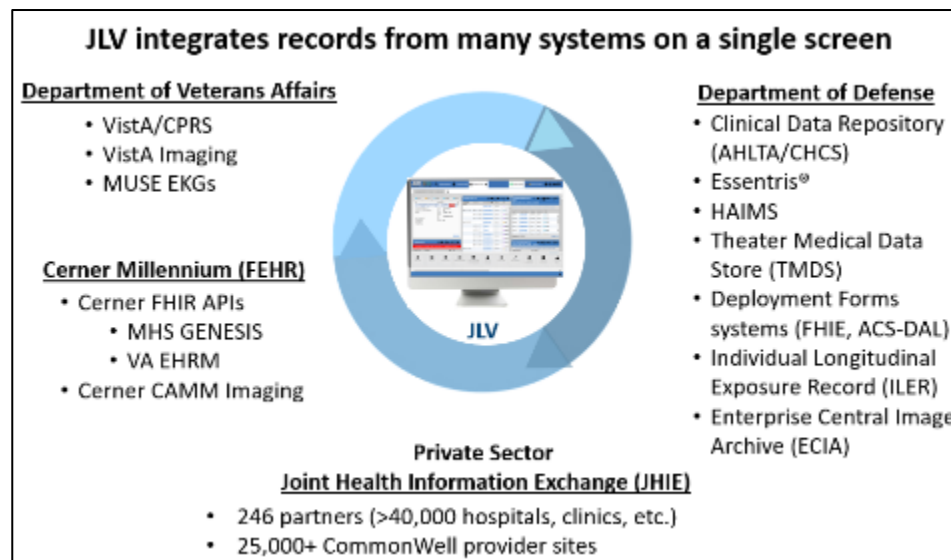
2. **Joint Health Information Exchange (HIE).** The joint HIE is a secure network that shares Veteran and Military Health System beneficiary health care information electronically with civilian network providers who join the eHealth Exchange[2] and CommonWell.[3] Community partners who join undergo stringent security requirements to access patient records and health information securely, regardless if 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.
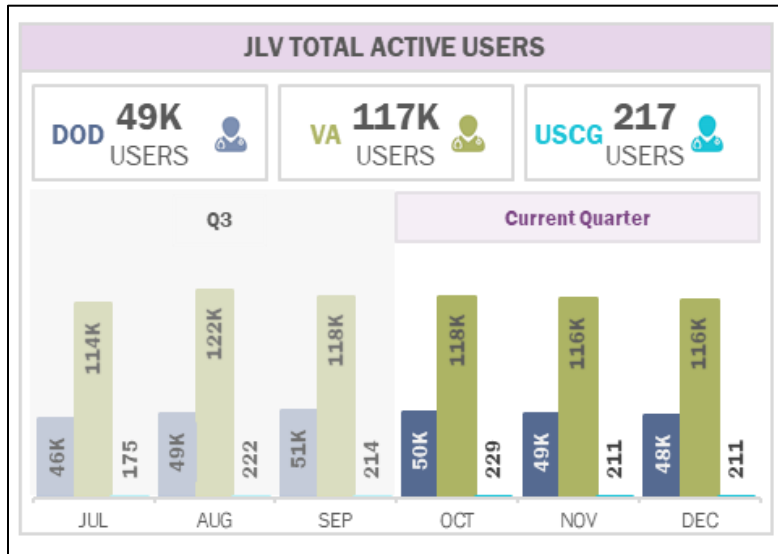
The FEHRM, DOD and VA continue to expand HDI by improving upon the more than seven million patient records currently shared monthly between the two Departments, as defined by the total number of JLV records viewed by the Departments reported as of December 31, 2022.

---

[2] eHealth Exchange - Network of Networks connecting federal agencies and non-federal health care organizations so medical data can be exchanged nationwide. eHealth Exchange online, October 14, 2022, https://ehealthexchange.org/

[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, https://www.commonwellalliance.org/about/faq/
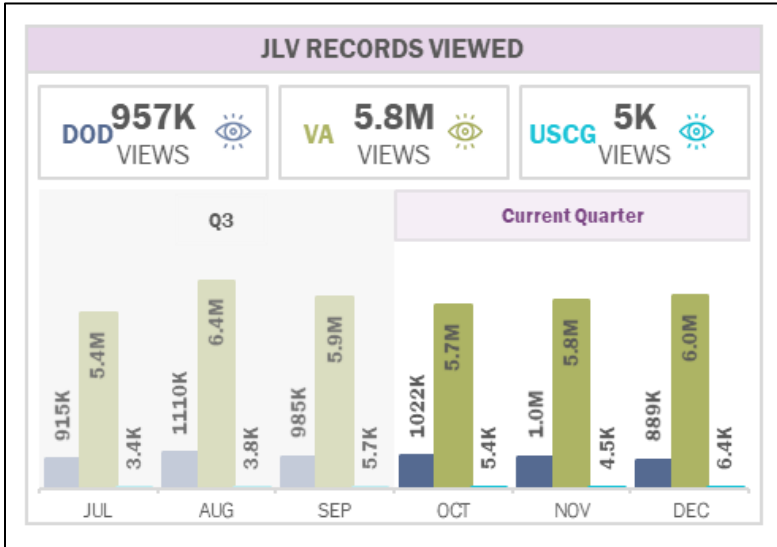
Department Integration

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.
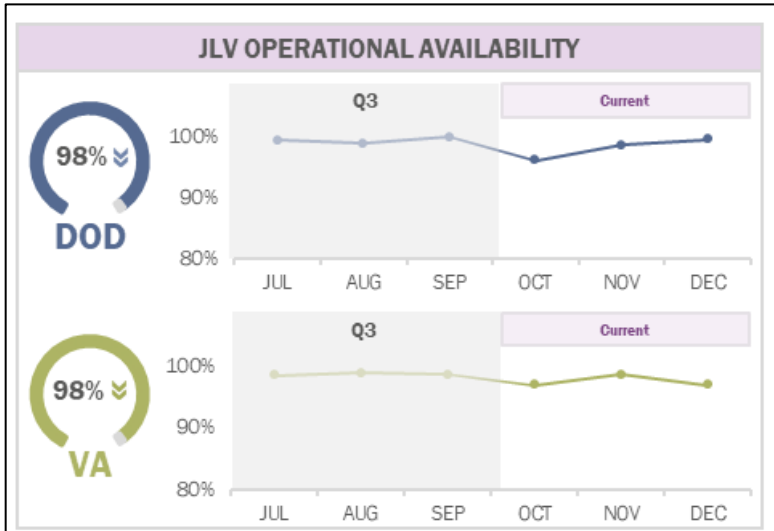
JLV TOTAL ACTIVE USERS

| DOD | **49K** USERS | VA | **117K** USERS | USCG | **217** USERS |

Q3 | Current Quarter

	JUL	AUG	SEP	OCT	NOV	DEC
DOD	46K	49K	51K	50K	49K	48K
VA	114K	122K	118K	118K	116K	116K
USCG	175	222	214	229	211	211

JLV Total Active Users

Definition

Active User: a unique user who 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 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).
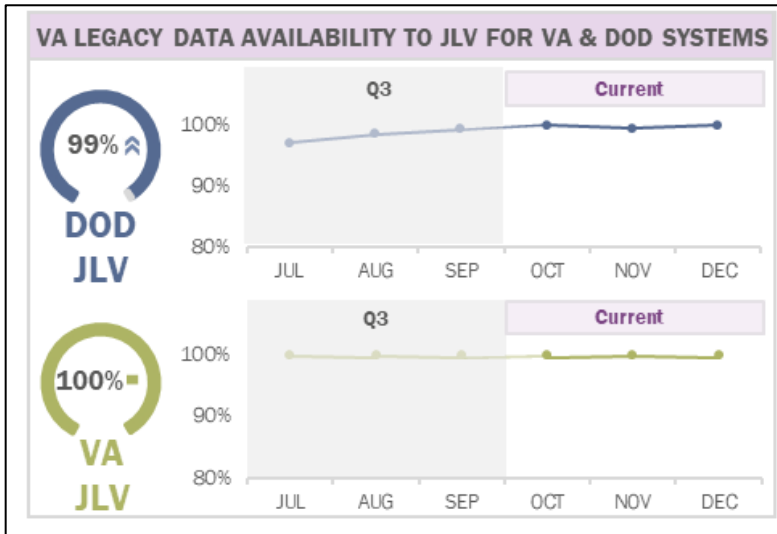
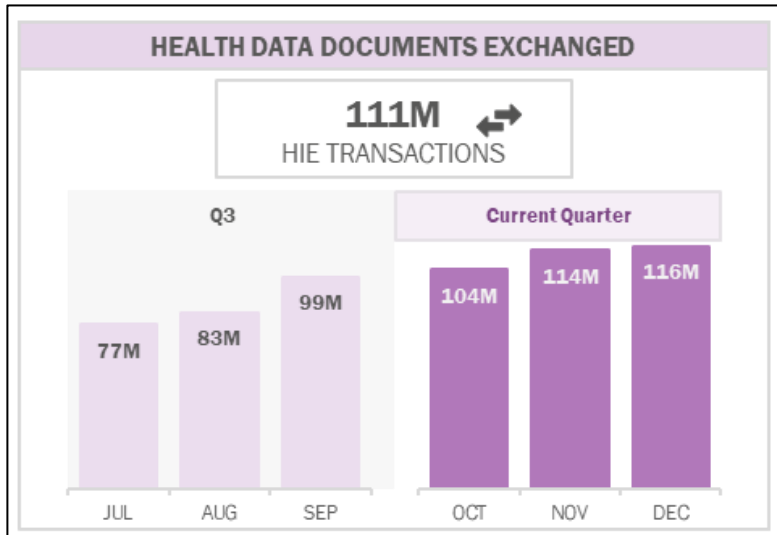**VA Legacy Data Availability to JLV for VA & DOD Systems**

Definition

DOD – The percentage of time the Data Exchange Service is available on the data server for all the sites located in the data centers in support of DOD-to-VA HIE.

VA – The percentage of time during the month that VistA Data Services was operational (no errors and VistA data available to both DOD and VA users) in all production environments.

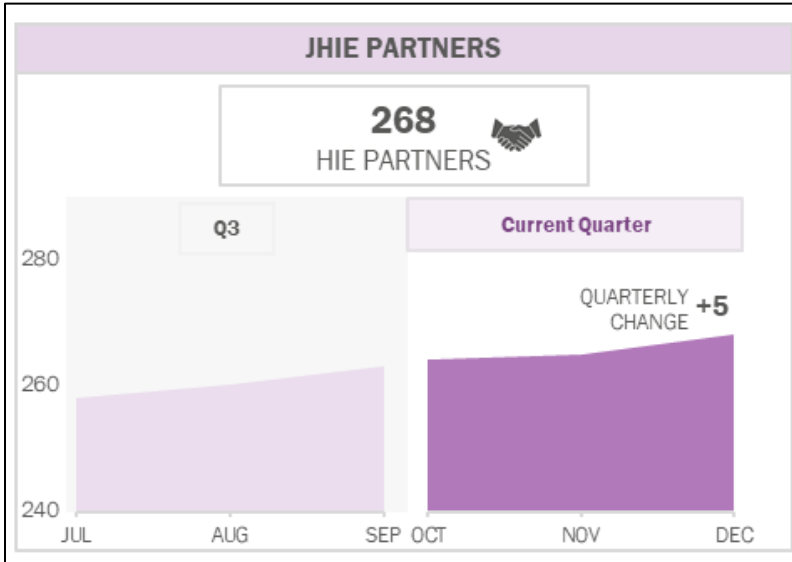# FEDERAL ELECTRONIC HEALTH RECORD MODERNIZATION

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 sector partners as best practices and improvements are implemented.

HEALTH DATA DOCUMENTS EXCHANGED

111M ⇄
HIE TRANSACTIONS

Q3			Current Quarter		
77M	83M	99M	104M	114M	116M
JUL	AUG	SEP	OCT	NOV	DEC

Joint Health Information Exchange (joint HIE) Transactions
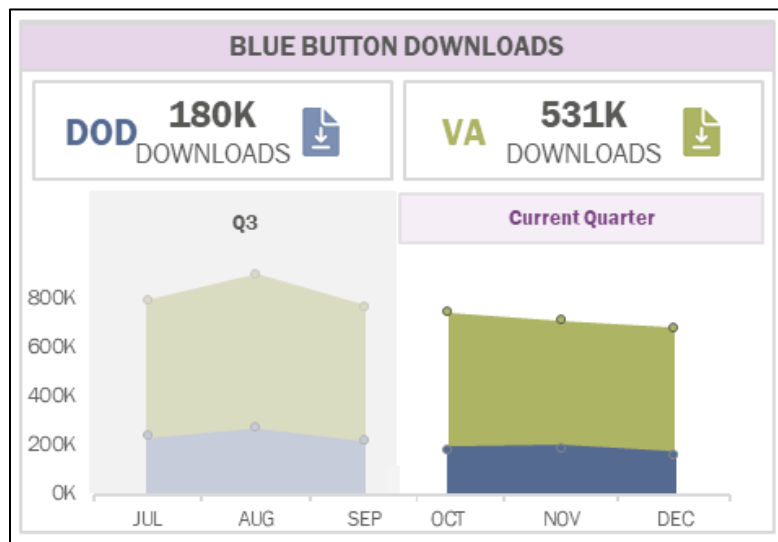
Definition

Monthly count of C-CDA, C32 or C62 (document architecture that facilitates interoperability of health data between EHR systems) documents exchanged between the Departments and private partners.

JHIE PARTNERS

268
HIE PARTNERS

Q3	Current Quarter

QUARTERLY CHANGE **+5**

280
260
240
JUL   AUG   SEP OCT   NOV   DEC

| Joint HIE Partners Onboarded |
|---|
| Definition |
| Monthly and cumulative count of private sector providers who are partners in the joint HIE (a private sector provider 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.
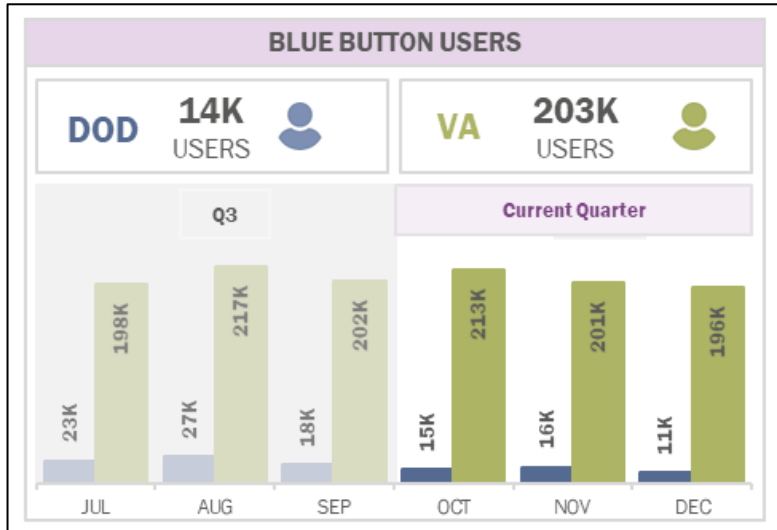

Blue Button Downloads

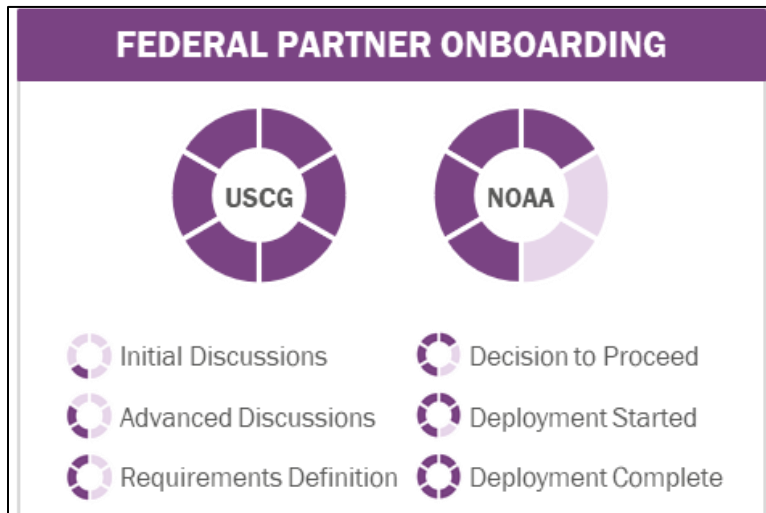| Definition |
| --- |
| Total number of data downloads (e.g., PDF, text) generated by end users per month. |
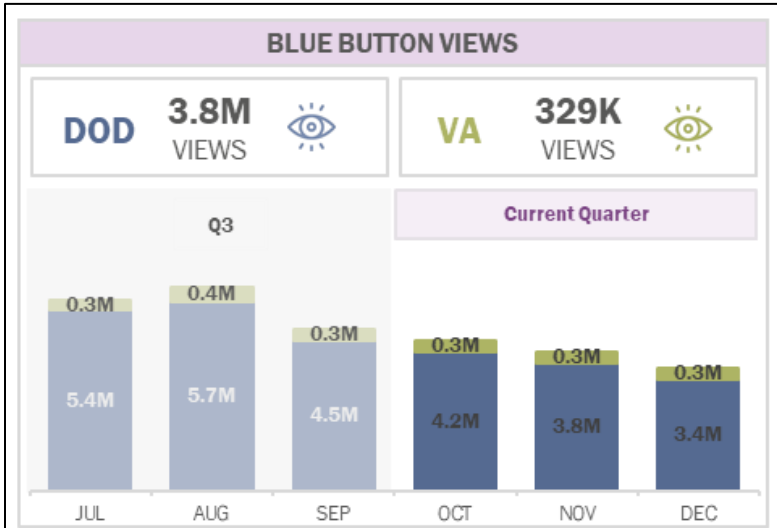
Blue Button Views		
Definition		
Average number of views generated by end users per month		

Monthly Unique Blue Button Users
Definition
Number of unique Blue Button users within a month.

Federal Partner Onboarding

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

FEDERAL PARTNER ONBOARDING

USCG

NOAA

Initial Discussions   Decision to Proceed

Advanced Discussions   Deployment Started

Requirements Definition   Deployment Complete

Federal Partner Onboarding

Definition
Progress of collaborations with new federal partners who are interested in joining the federal EHR enterprise.