



FEDERAL ELECTRONIC
HEALTH RECORD
MODERNIZATION



FEHRM

Interoperability Progress Quarterly Report

FIRST QUARTER, FISCAL YEAR 2022

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Interoperability Metrics

Pursuant to the National Defense Authorization Act for Fiscal Year 2020 (NDAA FY2020), the Federal Electronic Health Record Modernization (FEHRM) office will establish a Joint Interoperability Strategy with the Department of Defense (DOD) and Department of Veterans Affairs (VA). As part of this process, the FEHRM will evaluate metrics appropriate for assessing and monitoring progress toward achieving the outlined strategy.

A snapshot of the current baseline Health Data Interoperability (HDI) metrics used to track progress toward modernization and enhancement of HDI is included below. Appendix A includes details outlining each metric category: (A) DOD/VA Integration, (B) Community Partnerships and (C) Patient Engagement.

Electronic Health Record Modernization

- **FEHRM Office:** During the first quarter of FY2022 (Q1 FY2022), the FEHRM continued to focus on 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, which is 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 that are 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, which is the meaningful use and exchange of data, to improve the 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 Annual Summit:** During Q4 FY2021, the FEHRM convened the first-ever Federal EHR Annual Summit of clinical staff from DOD, VA and the Department of

Homeland Security's United States Coast Guard (USCG); community providers; and other leading clinical experts to assess the use of the single, common federal EHR.

Participants engaged in valuable discussions on opportunities for enhancing the federal EHR to better serve our Service members, Veterans, and other beneficiaries. The summit allowed end users to provide valuable feedback to FEHRM, DOD and VA leadership.

During Q1 FY2022, the FEHRM continued its work with the training and configuration teams of Defense Health Agency Health Informatics (DHA HI)/Defense Healthcare Management System Modernization and Veterans Health Administration (VHA)/Electronic Health Record Modernization Integration Office (EHRM IO) (formerly, VA's Office of Electronic Health Record Modernization) to mitigate, solve or highlight training items identified during the summit.

- **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 Joint Change Control Board (JCCB) and is essential to operating the single, common federal EHR, providing DOD, VA and USCG functional oversight of all configuration decisions impacting the production baseline.

For Q1 FY2022, the JSaAB approved 315 items; including one daily go-live item that surfaced during Wave TRIPLER, and two items related directly to the COVID-19 response. The FEHRM coordinates an e-JSaAB process for urgent and emergent issue resolution during off-hours; this e-JSaAB process was successfully used eight times during Q1 FY2022. Additionally, the FEHRM manages the Functional Decision Group (FDG). The FDG 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 issues that apply to the federal EHR.

During the reporting period, the FDG continued to monitor the program management office (PMO) technical communities who were tasked to address the need for allergy and medication checks, to cross between both Departments' legacy and modern EHR systems. This effort continues with a proposed technical implementation in the second quarter of FY2022. The FDG continued to expand on an initiative to evaluate proposed DOD and VA configuration change requests for convergence. Most recently, the FDG staff evaluated the possibility of combining Functional Subject Matter Expert (SME) Councils into joint DOD/VA Councils. Currently under development and review by FDG is to establish a much needed, high-impact joint DOD VA Federal Oncology Working Group (FOWG) to address joint oncology workflows and therapeutic treatment regimens. FOWG was initiated with early success in converging high level oncology regimens while maintaining flexibility for unique protocols (e.g., research) across both Departments. The FEHRM anticipates the formalization of the FOWG and other working groups via FEHRM-sponsored charters in the future. Additionally, DOD and VA continue to work toward a

common pre-production training and access set of business rules to ensure that the user experience is consistent across the common platform.

- **End-User Engagement:** During the reporting period, 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 equally assess satisfaction across DOD and VA, save government resources and reduce overall costs.

The survey instruments 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 Joint EHR Patient Satisfaction item sets were collaboratively selected and successfully included in the Q3 FY2021 surveys for both DOD and VA. Since the CAHPS-HIT item set deployed in Q3 FY2021, the HIT item set has received approximately 2,800 responses from DOD legacy and Cerner deployed sites. The VA SHEP-CG team will analyze responses collected from VA legacy and Cerner deployed sites during Q2 FY2022. Results will be relayed to the Patient Satisfaction Working Group for comparison across DOD and VA.

- **Joint Functional Enhancements and New Requirements Management:** In Q1 FY2022, the FEHRM initiated standing up a functional enhancements/new requirements workstream to aid in the Departments' joint efforts for navigating the functional requirements planning and capabilities assessment phase of the overall requirements management process for the single federal EHR platform.

To support the FEHRM's primary mission of implementing a single, common federal EHR, establishing a system-wide, solitary, formalized enhancement and new requirements process will facilitate the meeting of key goals for standardizing the identification of shared system capability needs and gaps. Further, this will generate cross Departmental unified requirements gathering and elicitation activities.

The FEHRM's governing body will initially preside over the collaborative decision-making efforts of the Departments in the areas of convergence and prioritization of functional requirements. The expectation is that the Departments will present as a single enterprise-wide entity when negotiating with the vendor, project manager and PMO. The program is expected to kick off in Q2 FY2022.

- **FEHRM Revenue Cycle/Business Processes:** In Q1 FY2022, the FEHRM continued the development of additional Referral Management Interim State Enterprise Joint Process Maps (ISEJPMs) to reflect referrals of DOD patients to VA services (in the direction of DOD MHS GENESIS to VA Legacy). The team closely collaborated with the DOD/DHA

Business Functional Champion, Unified Business Office (UBO), Referral Management Working Group, DOD/VA Sharing Office and VHA Office of Community Care to develop:

- Two interim-state enterprise process maps for referral management at collocated and non-collocated staff facilities (DOD to VA), and
- One interim-state enterprise process map for self-referral/emergency referral (DOD to VA).

In Q2 FY2022, this group will complete the development and obtain executive approval of joint inter-departmental billing requirements, as well as three DOD to VA referral management interim-state enterprise process maps.

- **Joint Enclave Data Management:** During the Q1 FY2022 reporting period, there were several ongoing projects to address joint data management. The FEHRM stood up several joint DOD/VA groups with different focus areas including Cerner codesets, terminology and data governance.

During Q1 FY2022, the groups outlined a draft data governance structure to define data management activities under a unified understanding of responsibilities across DOD, VA and the FEHRM. The plan development is underway and anticipated for comment/release in Q2 FY2022.

Additionally, in Q1 FY2022, the FEHRM stood up an executive body, Executive Data Management Board (EDMB), which will function as the formal Data Management and Governance of FEHRM Data Assets. The EDMB serves as the authorizing and prioritizing function for joint data management activities impacting the Federal Enclave. Under the executive body, data and analytics will be governed by the Data Governance Board (DGB) and FEHRM Analytics Board (FAB), respectively. Furthermore, processes and workflows were developed to coordinate work across these new boards with a focus on efficiency, effectiveness and traceability. To further realize these areas of focus, the workflows and processes are being built into an existing ticket management solution (IBM JAZZ). The development of this tool for FEHRM data management activities is nearing completion. Testing and validating activities are being planned and the release of an Initial Operational Capability (IOC) Solution is slated for mid-Q2 FY2022.

In Q1 FY2022, the Federated Interagency Terminology Service (FITS) is continuing to engage with the vendor and Departments to jointly review and manage critical terminology projects. Fourteen project or issue proposals were submitted and seven approved by the FITS. The FEHRM terminologists completed review and mappings of FITS 006 LOINC codes to Cerner Millennium Note Type for flow of clinical notes inbound to Cerner. This work was forwarded to VA Knowledge Base Systems (KBS) terminologists for final review. The FEHRM also continues to monitor and normalize Joint Longitudinal Viewer (JLV) and Clinical Data Repository/Health Data Repository (CHDR) legacy and

Cerner clinical domains such as Medication Status (FITS011), allergens, medications, labs and document types.

- **Federal Enclave Management:** The FEHRM continued hosting various joint technical activities including Environment Management Operations Center (EMOC) sessions in partnership with DOD, VA and USCG program offices, their prime vendors and key stakeholders responsible for segments of the federal EHR ecosystem. In Q1 FY2022 those activities included sessions on Revenue Cycle Expansion, VA/DOD Data Attributes, Patient Identification Harmonization and an update on the vendors' Technology Roadmap.

Consistent with the FEHRM's charter mandating that it identify opportunities for efficiency and system optimization, the FEHRM works with stakeholders to identify Enclave measurements for the Interoperability Modernization Strategy. In Q1 FY2022, the FEHRM reviewed available data and update frequencies for measures of Enclave performance, and the progress of deployments. This analysis will help ensure that the measurements relied upon to manage the Federal Enclave accurately report on its health by clearly defining the measurement and what it means. Looking ahead, the FEHRM will design an internal team measurement reporting technique to gather and share metrics that identify availability trends, and the federal government's progress towards targeted deployment growth.

The FEHRM is also working the DOD and VA PMOs to actively manage the domains comprising the Federal Enclave to meet the needs of the federal agencies using the federal EHR. During Q1 FY2022, the FEHRM consulted with a series of DOD and VA SMEs to codify the as-is processes, and in Q2 FY2022, the FEHRM will continue analyzing these finding, and assessing the risks, issues and opportunities related to enterprise-wide domain management practices.

The FEHRM is also working with the DOD and VA PMOs to optimize the change management process. In Q1 FY2022, the FEHRM completed a mapping of the current change management processes for the Enclave and ecosystem. In Q2 FY2022, the FEHRM will align the disparate change management activities under a unified federal change control board strategy to minimize the challenges that agency-specific change control processes present to the Federal Enclave.

- **Federal Software Release Management:** In Q1 FY2022, the FEHRM worked with the Departments' PMOs to ensure canonical nomenclature is documented and will be used. Also, in Q1 FY2022, the FEHRM worked with the agencies to initiate planning the release of Capability Block 6 (CB6), which is slated for release in Q2 FY2022.

- **Identity, Credential and Access Management (ICAM):** Ensuring the right information is provided to the right person at the right time is a foundational requirement for the single, common federal EHR. During Q1 FY2022, the FEHRM worked with technical stakeholders from DOD, VA and the commercial sector on the evaluation of four potential solutions that will provide a unique identifier for DOD, VA and USCG. This eventual unique identifier will also support other federal agencies that adopt the federal EHR. The FEHRM anticipates it will complete this collaborative analysis in Q2 FY2022.
- **Enterprise Operations Center (EOC):** The 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. The EOC continued to support cross-organizational collaboration and executive level reporting on the Federal Enclave and ecosystem during federal go-live events. During Q1 FY2022, the EOC provided joint executive level briefings for DOD and USCG go-live events—completing the USCG incorporation into the federal EHR. 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.
- **FEHRM Joint Testing Initiatives:** The FEHRM test activity focused on two key areas to mitigate risks to the federal EHR—partnering with MITRE to verify the single, common federal EHR meets the interoperability performance standards outlined in NDAA FY2020, and collaborating with DOD, VA and USCG to establish a multiphased approach for controlling the collocation of test/pseudo records in the Federal Enclave.

In Q1 FY2022, the FEHRM commenced the foundational work required 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). Most significantly, the FEHRM worked with MITRE to transform statutory interoperability objectives into testable uses cases, which are central to the testing framework that MITRE is establishing to complete their assessments. The FEHRM also continued to work with DOD and VA to identify the level 4 joint sharing site to host the Phase I assessment.

Also, during Q1 FY2022, the FEHRM's Joint Testing Initiatives worked with DOD, VA and USCG to control the creation, and use of test/pseudo records being collocated in the Federal Enclave. The Departments established that these records must be collocated in the Federal Enclave to perform system tests and set up workflows for first-time users. The FEHRM worked with DOD and VA to ensure their respective draft policies are aligned with respect to key processes and standards. The FEHRM also worked with all three

agencies to propose both a governance body to manage the growth and use of test/pseudo records, and a system flag that will help reduce this risk.

- **Cybersecurity -- Cyber Tabletop:** Consistent with the direction contained in Executive Order 14028, the FEHRM is undertaking a series of focused exercises to continue to evolve the cybersecurity posture of the single, common federal EHR to include prevention, detection, escalation and response coordination. In Q1 FY2022, the FEHRM conducted a “Black Swan” tabletop exercise with technical SMEs from DOD, VA and their commercial partners. In Q2 FY2022, the FEHRM will conduct two follow-on tabletop sessions.
- **Cybersecurity – Joint Incident Management Framework:** Foundational to the cybersecurity posture of the single, common federal EHR is documenting and optimizing a framework for responding to cybersecurity incidents. The FEHRM is maturing an overarching incident management framework and associated processes that will continue to guide responses to cybersecurity incidents impacting the Federal Enclave. In Q1 FY2022, the FEHRM initiated an analysis of Incident Management Plans used by DOD, VA, Leidos Partnership for Defense Health and Cerner. In Q2 FY2022, the FEHRM will complete that analysis and work with these stakeholders to finalize a draft Joint Incident Management Framework. Also, in Q2 FY2022, the FEHRM will work with DOD, VA and their commercial partners to finalize a Joint Incident Management Process Guide to orchestrate and optimize these stakeholders’ responses to cybersecurity incidents.
- **Cybersecurity Risk Mitigation:** Consistent with its charter to orchestrate the joint cybersecurity program, the FEHRM continues actively addressing cybersecurity risks to the Federal Enclave. In Q1 FY2022, the FEHRM confirmed how the Federal Enclave complies with National Institute of Standards and Technology (NIST) and DOD cybersecurity requirements. Part of this evaluation is focused on onboarding activities to help federal agencies adopting the single, common federal EHR meet applicable NIST and DOD guidelines.
- **Joint Sharing Sites (JSS) Implementation Support:** In Q1 FY2022, the FEHRM engaged in numerous planning, execution and analysis activities to support the unique health informatics needs at joint DOD and VA sharing sites. The FEHRM actively worked with its interagency partners (DOD Healthcare Management System Modernization [DHMSM] and EHRM IO PMOs) to resolve issues (e.g., end-user provisioning) associated with DOD EHR deployment at Tripler Army Medical Center (TAMC)-Pacific Islands VA Health Care System.

The FEHRM, alongside its DHA HI and VHA Office of Health Informatics (VHA OHI) partners, evaluated the nature of sharing at DOD Wave HOOD and Wave BRAGG joint sharing sites to identify potential risks due to asynchronous deployment as well as

determine the need for interim-state joint process maps (e.g., laboratory, radiology/MRI and dialysis) to support ongoing operations after DOD go-live. Additionally, the FEHRM continues to provide pre-deployment support to DOD Wave BAMC and Wave LACKLAND joint sharing sites through the DOD go-live schedule in Q2 FY2022.

The FEHRM convened DHMSM and EHRM IO stakeholders to evaluate patient care location (PCL) decision-making processes and their impact to EHR deployment at joint sharing sites as part of the FEHRM Risks, Issues, Opportunities (RIO) process.

The FEHRM initiated the direct messaging clinical proof of concept effort with David Grant Medical Center to assess the feasibility of transferring clinical information via a secure messaging platform. If successful, in Q2 FY2022, the FEHRM will evaluate the use of direct messaging at other joint sharing sites, in other clinical settings, and in partnership with relevant DOD and VA stakeholders.

- **Captain James A. Lovell Federal Health Care Center (FHCC) Federal EHR Implementation:** In Q1 FY2022, the FEHRM, in collaboration with EHRM PMOs, Department health informatics and the vendor, concluded the FHCC End-to-End (E2E) Assessment. These engagements assessed current state clinical, business, technical, functional/configuration and training processes. The E2E Assessment was held onsite over a period of five weeks and included more than 175 sessions with FHCC SMEs. The outputs include 84 joint current state process models, 46 completed functional configuration questionnaires and technical current state documentation that all serve as inputs to the Enterprise Requirements Adjudication (ERA) process.

In conjunction with the EHRM PMOs, the FEHRM developed and initiated the ERA process, a thorough, high-impact decision-making process focused on DOD and VA policies, requirements and deployment approaches, where discrepancies exist. The ERA process aims to deconflict build between DOD and VA and will inform the FHCC Federal EHR Implementation Plan. The ERA process is expected to continue through Q2 FY2022.

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

In Q1 FY2022, the FEHRM convened the Contracting Sub-Workgroup to identify and draft the documentation required for an Interagency Agreement to support the FHCC federal EHR implementation. The group, comprised of members from the Program Executive Office, Defense Healthcare Management Systems; DHMSM; EHRM IO; and FEHRM, is preparing documents and leading discussions on a fair share approach.

- **Deployment:** Throughout the reporting period, the FEHRM continued to drive federal capabilities to enhance health care by leading value-added activities for DOD, VA and USCG EHR deployments.

The FEHRM worked closely with the Departments' functional, technical and site leadership to mitigate challenges and establish prioritized activities to advance solutions, capability delivery and joint initiatives supporting DOD, VA and USCG operational requirements. During Q1 FY2022, the FEHRM supported the USCG's wave ATLANTIC deployment, successfully completing the USCG's shoreside EHR deployment activities.

Joint Health Information Exchange (HIE)

The joint HIE is the largest e-health exchange in the country now. The joint HIE is currently at more than 22,400 provider sites, 65% of all hospitals, with 45 eHealth Exchange partners and 11.5 million patients enrolled. The Consolidated Clinical Data Architecture (C-CDA) standard efforts underway are important to the work of the FEHRM because a large percentage of care for both DOD and VA beneficiaries comes from community providers. The joint HIE is now live with Diameter Health, which enables inbound and outbound C-CDA documents to be pushed from DOD/VA joint HIE to the VA CDQ Tool for scoring of clinical quality and completeness, and subsequent sharing of reports between Departments. To bring C-CDA into the future, the team published a clean version of the C-CDA companion guide in October 2021 and are now in a design cycle with Health Level 7 International® (HL7) for publication. HL7 creates a set of national and international standards that are released as implementation guides used to provide guidance for sharing data between various health care providers.

Interoperability Modernization Strategy

The DOD-VA Interoperability Modernization Strategy (IM Strategy) is an effort responding to the NDAA FY2020 request for the development of a "comprehensive interoperability strategy." The effort was divided into three phases: Strategic Goals & Objectives (Phase 1); Inventory of Current Initiatives (Phase 2); and Identification of Performance Measures (Phase 3). During the reporting period, the IM Strategy Integrated Product Team (IPT) moved toward completion of Phase 3 through the development and consensus approval of performance measures marking progress toward the Strategy's four goals and 17 objectives. Nineteen of 20 initiatives were reviewed and more than 160 performance measures were proposed. The performance measures were prioritized and are documented in the primary deliverable, the IM Strategy Performance Measurement Plan. The Plan highlights 37 performance measures for further development.

Interoperability Standards

A successful interoperability ecosystem enables information sharing across the organization's boundaries to advance the effective delivery of health care for individuals and communities. Sophisticated and advanced policies, standards and technologies have to come together for interoperability to realize effective health care delivery. The FEHRM Standards team analyzes standards, fosters the development of and establishes guidelines for the use of data standards that support seamless integration of health data between the federal EHR and legacy and community partner systems, including collaborating with HL7 federal and industry partners and standards development organizations (SDOs) to advance national health data interoperability.

HL7 Fast Healthcare Interoperability Resources (FHIR) is a modern HL7 standard that leverages freely available internet technologies to securely exchange health information while HL7 Clinical Document Architecture (CDA) is an electronic document (XML-based) standard that defines the structure of certain medical records such as discharge summaries and progress notes. Below are the FEHRM interoperability standards initiatives and activities that are anchored to the FEHRM's mission.

- **Promoting Standards Implementation:** The FEHRM began collaborative efforts with the FHCC Core team by reviewing the FHCC Concept of Operations (CONOPS), Memorandum of Understanding (MOU) and Comments Matrix for privacy-related standards. The FEHRM submitted input regarding updating the FHCC CONOPS document to reflect interoperability standards as a guiding principle and modifying the breach language proposed by DOD, for example, how FHCC privacy breaches would be handled. The FEHRM will continue to review key FHCC documents, identify gaps in standards, apply best practices and support adoption of standards, including making any necessary recommendations when applicable and appropriate throughout FY2022.

In the last quarter of FY2021, Office of National Coordinator for Health Information Technology (ONC) launched a new initiative called United States Core Data for Interoperability (USCDI+) to provide a cutting-edge opportunity for federal agencies such as DOD, VA and Centers for Disease Control and Prevention (CDC) to add specific data classes and elements that will be operated as extensions to the existing USCDI. Following the announcement of USCDI+, the FEHRM held meetings with VA to discuss a collaborative opportunity to identify and analyze additional specific health data domains/classes and elements needed for USCDI+, which will focus on Veterans' health and wellness. The discussion was joined by key VA stakeholders and leaders, and the FEHRM and VA reached concurrence to continue the effort and identify next steps to meet the USCDI+ requirements and accomplish the goal for VA. Additional key activities are below:

- Hosted a joint FEHRM, VA and ONC meeting in December 2021 to discuss desired outcomes, processes and timelines, relationships to USCDI v2 and v3, and the need to identify SME POCs to assist in developing strategy and collaborative steps to develop federal agency specific data domains, classes and elements.
 - Established the initial plan, approach, template, strategy, potential partnerships, meeting agenda, data sources and gathering, gap analysis, and creation of a data collection template, internal and leadership coordination, and ultimate formatting and submission to ONC.
 - Collaborated with VA to develop and propose a candidate list of domains aligned with national policies; developed and shared a project charter and data collection template/framework for datasets to be included for USCDI+; successfully held working sessions with VA to focus on the initial phase and potential partnerships.
- **Dental Data Exchange:** Both the *HL7 CDA R2 Implementation Guide: Dental Data Exchange, Release 1, STU 1 – US Realm* and the *HL7® FHIR Implementation Guide: Dental Data Exchange, Release 1 – US Realm* are formally published by HL7 and are designed to facilitate care coordination and create best practices for the electronic exchange of patient data between dental and medical professionals. With the available standards and ongoing collaboration efforts with representatives from DOD, VA, American Dental Association (ADA) and the HL7 community, the FEHRM is planning a pilot implementation of the dental data exchange capabilities at a future HL7 FHIR Connectathon.
 - **HL7 Engagements and Balloting:** HL7 Working Group Meetings allow federal agencies, stakeholders and the HL7 community to work on standards as well as network with industry leaders from around the world. FEHRM attendance allows SME perspective on current trends and initiatives from ONC, HL7 and key stakeholders and is also necessary to remain current on standards activities and ballots (which the FEHRM SMEs review three times annually), and to participate in working sessions to influence ballot and policy outcomes. In October 2021, the FEHRM Standards team developed, completed and distributed an evaluation report to the FEHRM leadership that summarized significant milestones, accomplishments and activities for projects and balloting that may impact interoperability following the 2021 September HL7 Working Group Meeting (WGM).

During the reporting period, the FEHRM participated in HL7 FHIR Connectathons. HL7 FHIR Connectathons allow implementers and developers to gain hands-on experience developing FHIR-based solutions by participating in one of many tracks. FEHRM attendance allows SMEs to validate implementation guides for which FEHRM actively analyzes or participates in the development.

The FEHRM participated in the HL7 ballot cycle during Q1 FY2022. The HL7 ballot cycle represents a critical milestone to cast FEHRM, DOD and VA votes for standards including CDA and FHIR-based standards. Engaging in the ballot cycle gives the FEHRM an opportunity to promote the development and maturity of EHR standards.

- **Consolidated CDA (C-CDA) Product Management:** C-CDA is the U.S. standard for exchanging summary care records among providers, including allowing EHRs and HIEs to store and process documents while also letting beneficiaries access and read them on Web browsers and mobile devices. It contains critical clinical content areas such as electronic discharge summaries, progress notes, continuity of care documents and procedure notes to better exchange patient information among health care actors. C-CDA, which is used to exchange 5-6 million documents daily in support of patient care, needed to evolve to be able to support ONC's recently published USCDI v2 data classes and elements. In Q1 FY2022, the FEHRM led design efforts with leaders in the HL7 community, including representatives from major EHR vendors and the ONC, to evolve the C-CDA standard to be compatible with the ONC's recently published USCDI v2 data policy. The resulting new design and implementation guidance was balloted for feedback from HL7's membership at the end of Q1 and will be reconciled and published with community input throughout Q2 and Q3.
- **HL7 Da Vinci Project:** The HL7 Da Vinci Project (as known as *Payer-Provider Health Information Exchange*) brings together payers, providers and health care technology vendors, along with HL7, 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. Historically, interoperability challenges limited stakeholders in the health care community from achieving better care at lower cost due to a lack of data standardization and access to information that may impact the ability of both payers and providers to create efficient care delivery solutions and care management models. The adoption of HL7 FHIR should result in more positive clinical, quality, cost and care management outcomes.

The FEHRM actively analyzed three HL7 Da Vinci use cases: 1) Da Vinci Burden Reduction, 2) Notifications, and 3) Member Attribution (formerly known as Risk Based Contract Member Identification). Below are the key activities and contributions by the FEHRM:

- Da Vinci Burden Reduction initiative included 1) Da Vinci Coverage Requirements Discovery (CRD), 2) Documentation Templates and Rules (DTR), and 3) Prior Authorization Support (PAS) implementation guides to support an integrated workflow and enable automated submission of required documentation and prior authorization from EHR and payer systems respectively.

- The Notifications Work Group continued to focus on subscriptions and the framework page for a detailed description of the technical workflow and API guidance.
- **Institute of Electrical and Electronics Engineers (IEEE) Engagements:** 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 assists the Departments in standardizing data exchanges between medical/mobile-health devices and health information systems (e.g., EHR) by contributing to the development of conceptual frameworks and standards and sharing standards information with the Departments for P1752 mHealth, P2933 Clinical Internet of Things (IoT) Data and Device Interoperability with Trust, Identity, Privacy, Protection, Safety, Security (TIPSS), and Life Science Technical Community Transforming the Telehealth Paradigm (LSTC). (NOTE: Mutual benefits exist between the two organizations, IEEE and International Standards Organizations (ISO), especially with respect to telehealth and emergency preparedness). Notable events included:
 - Collaborating with IEEE LSTC members to narrow the scope in relation to telehealth technologies and services that can be provided feasibly in emergency situations; analyzing Section 508 Compliance for emergency telehealth related communications; and performing meta-analysis of academic research and publications to promote transparency and equity for clinical devices and telehealth services in situations such as hurricane seasons and pandemics (e.g., COVID-19).
 - Engaging in IEEE P1752 Main Work Group meetings to discuss specific use cases from the Metabolic Subgroup with a focus on blood glucose monitoring and security requirements for Bluetooth.
 - Providing comments on the Protection, Safety and Security chapter of the proposed standard, IEEE P2933, with respect to the beneficial safety-related aspects of employing standards; reviewed v3 draft Privacy Chapter of Clinical IoT Standards and developed a list of Privacy/Security Standards to be included in Clinical IoT devices.
- **International Standards Organization (ISO) Engagements:** ISO is an independent, non-governmental international organization with a membership of 166 national standards bodies with a total of more than 21,000 standards. The FEHRM engaged as an active member of the ISO/American National Standards Institute (ISO/ANSI) Technical Committee (TC) 215. The FEHRM accepted ballot invitations and submitted ballot comments for standards and development projects that align with the FEHRM's charter and priorities. The FEHRM is very actively engaged in ISO standards work in support of community and global health by improving emergency preparedness and response.

For Emergency Preparedness and Response (ISO AWI 5477), the FEHRM co-authored and significantly influenced standards that shape the next generation of Public Health Emergency Preparedness and Response (PH EP&R) Information Systems. The PH EP&R Information System is a global effort involving SMEs from the United States, Australia, Canada, Japan and South Korea to reduce the severity of future health crises and mitigate the risk associated with those events. The PH EP&R Information System is designed for the ongoing collection, processing and use of operational information to inform best information leadership practices, situational assessments, decision-making and other actions required for PH EP&R operations to improve in response for pandemics and other emergency situations. Below are the key contributions and activities led by the FEHRM and key stakeholders:

- Significantly revised Section 4 of the draft standard and worked on core skills and competencies for health informatics professionals in public health emergency preparedness and response.
- Formatted the draft content for presentation to the ISO TC 215 Work Group 2 Community as one of key administrative steps to prepare for balloting.

The FEHRM also co-authored and significantly contributed to the ISO standard draft (ISO 29585 – Framework for Healthcare and Related Data Reporting), which reflects stakeholders’ clinical reporting and associated functional needs. The purpose of the intended standard is to enhance the framework for collecting, integrating and constructing health and clinical reporting services that deliver health care information to effectively service a wide range of decision-making and research questions. The standard draft in preparation for balloting is being informed by the FEHRM interoperability ecosystem; Trusted Exchange Framework and Common Agreement (TEFCA); and HL7 FHIR.

- Co-authored the standard draft, which is currently under review by ISO Member Countries for feedback.
 - Presented the standard draft to ISO TC Work Group 1 in preparation for balloting.
- **Key Contributions/External Engagements (Government and Commercial):** The FEHRM successfully hosted monthly FEHRM Standards Stakeholder Group meetings to share standards-related project updates to the Departments and key stakeholders, which also provided them an opportunity to collaborate on a variety of projects.
 - **Interoperability Standards Framework (ISF) v9:** The ISF specifies standards for the terminology, structure and transmission of health data between the Departments, the federal EHR and partner institutions. During Q1 FY2022, the FEHRM distributed a reframed and updated draft ISF v9 for input from DOD and VA standards SMEs. This draft of the ISF v9 included adding several standards required by ONC’s 21st Century Cures Act Final Rule, as well as alignment of ISF guidance to ONC’s latest Interoperability Standards Advisory.

Federal and Industry Engagements

- **Key Contributions/External Engagements (Federal and Industry):** The FEHRM engaged with multiple federal agencies and industries regarding health analytics and standards, data interoperability, and social determinants of health in predicting the wellness and health of a community. These events promoted the FEHRM’s mission and priorities by enhancing interoperability and standards.
- **Office of the National Coordinator for Health Information Technology (ONC) Engagements:** During the reporting period, the FEHRM continued collaboration with ONC stakeholders to further the progress of national and international interoperability standards and the quality of health information exchange required by the Departments. In this effort, the FEHRM participated in numerous ONC engagements, including meetings, webinars and public comment periods to inform their work supporting the 21st Century Cures Act. The FEHRM continued representation with the Federal Health IT Advisory Committee (HITAC); the Federal Health IT Coordinating Council (FHIT CC); and United States Core Data for Interoperability (USCDI) and USCDI+ Workgroups. The following are key details of these interactions.
 - Participated in the October and November 2021 HITAC and ONC HITAC Annual Report Workgroup meetings. The FEHRM presented an update of the Interoperability Modernization Strategy at the November 2021 HITAC.
 - Participated in five Trusted Exchange Framework and Common Agreement (TEFCA) Federal Workgroup meetings that brought together representatives from multiple federal entities engaged in health IT policies, programs, and oversight. This workgroup uses participant feedback to provide input to ONC to ensure TEFCA represents views of the whole federal government.
 - Coordinated final review by federal partners (DOD, VA) of the final draft, pre-publication version of the 2022 Interoperability Standards Advisory (ISA) Reference Edition. Analyzed and submitted comments to ONC on December 8, 2021.
 - Continued participation as a federal member of ONC’s monthly Project US@ initiative to develop and issue a unified, cross-standards development organization, health care industry-wide specification for representing and formatting patient address based on United States Postal Service (USPS) standards.
 - Hosted the first joint FEHRM-ONC-CMS meeting on October 7, 2021, where leadership shared current and planned activities and opportunities to enhance overall federal interoperability, engagements, and explore collaboration opportunities. Subsequent meeting on December 6, 2021, resulted in the FEHRM co-leading the collaboration on USCDI+, a service to federal partners who have a need to establish, harmonize, and advance the use of interoperable datasets that

extend beyond the core data in the USCDI to meet agency-specific program requirements.

- **Additional Q1 FY2022 FEHRM engagements with key federal stakeholders included the following:**
 - Hosted a quarterly FEHRM Town Hall for more than 100 participants on October 18, 2021, where Dr. Nhan Do, Director, Boston VA Cooperative Studies Program Informatics Center, presented on the VA Office of Research and Development Enabling Technologies for Rapid Learning Health systems (ENTHRALL). ONC provided an update on the Public Health Informatics Technology (PHIT) Workforce Development Program and CMS provided an update on Patient Access final rule (CMS-9115-F)(85 FR 25510).
 - Hosted the 11th FEHRM Industry Roundtable with a theme of “Protecting the Patient – The Role of Cybersecurity” on November 18, 2021, for nearly 200 participants, representing 77 industries and 20 federal agencies. Leaders from DOD, VA, and USCG; ONC; and CMS discussed EHR modernization efforts and highlighted current and upcoming interoperability initiatives. There was a panel discussion on the impact of Presidential Order 14028 – Improving the Nation’s Cybersecurity, and Zero Trust Architecture on the federal EHR and patients.
 - Continued participation in the CMS-sponsored Post-Acute Care Interoperability (PACIO) Workgroup and PACIO Project Advance Directive Use Case Subgroup established in Q2 FY2021 to create FHIR implementation guidance for advance directives information interoperability.

- **Additional Q1 FY2022 FEHRM engagements with key industry stakeholders included the following:**
 - Participated in HL7 Gravity Community Collaboration Project and Gravity FHIR Implementation Guide Technical (Patient Care) Workgroup Meetings to review and analyze inclusion of social determinants of health in standards and revision to the ICD-10. The FEHRM evaluated and voted on multiple domains, goals and interventions, which led to a formal Gravity Project ICD-10-CM submission representing needed terms from the project’s consensus, evidence-based analysis of social isolation, psychological stress, intimate partner violence, veteran status and elder abuse. The FHIR Implementation Guide Work Group focused on development and finalization of the Implementation Guide, workflows and preparations for the January 2022 HL7 Connectathon.
 - Began preparations for the HL7 January 2022 Ballot Cycle by reviewing and voting on prioritized ballots; tracking ballots for FEHRM, DOD and VA; and engaging in the HL7 Workgroup meeting with key stakeholders and the HL7 community.

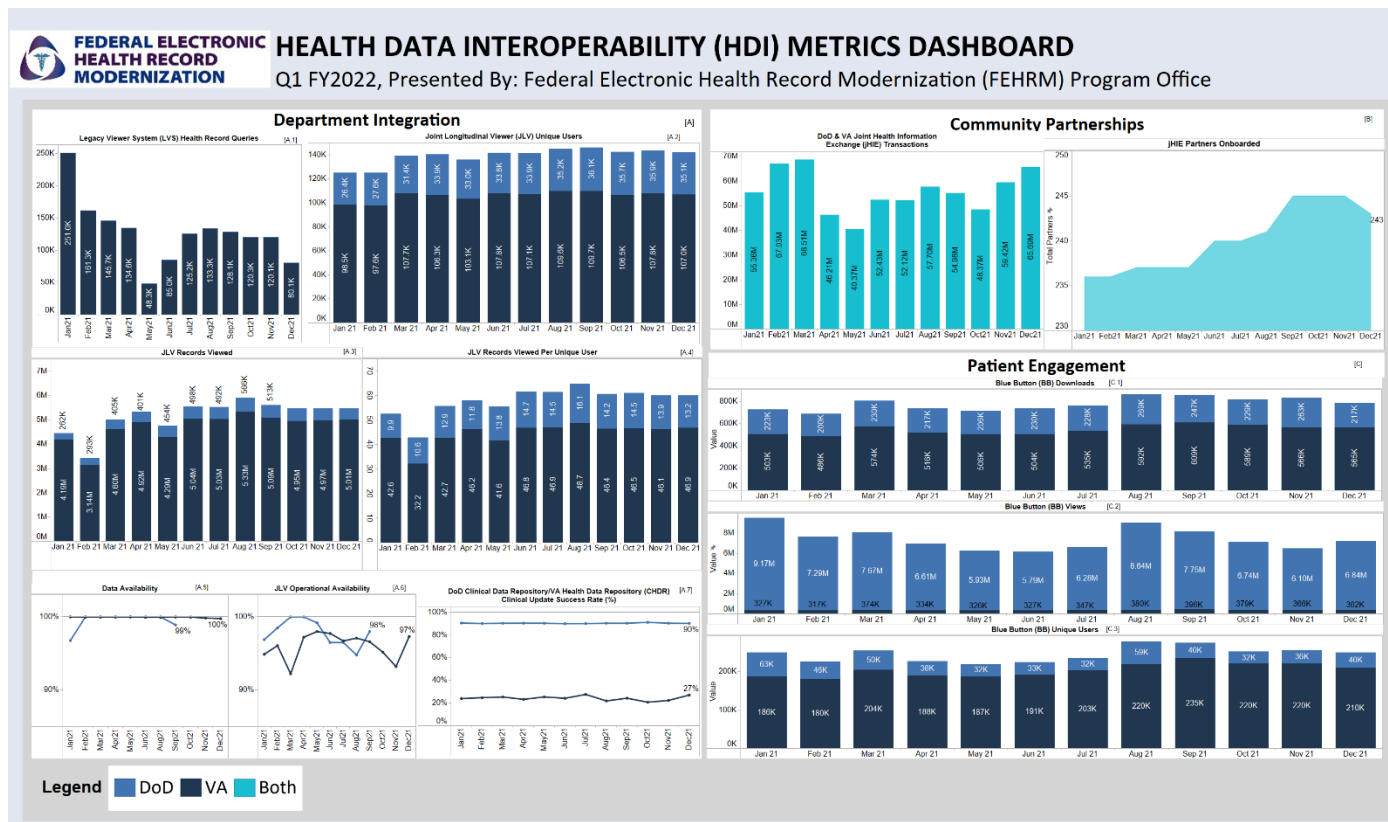
Conclusion

The Departments remain 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 the DOD, VA, USCG and private sector will serve 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 continue to 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 FY2022, the FEHRM, DOD and VA continued to collaborate to monitor baseline Health Data Interoperability (HDI) metrics and the progress toward modernization and enhancement of HDI by both Departments. Each section shows a different interoperability dimension, as derived from the FEHRM’s HDI Measurement Framework: (A) Department Integration, (B) Community Partnerships and (C) Patient Engagement. Figure 1 represents a snapshot of the Q1 FY2022 HDI Metrics Dashboard. Detailed explanations of the metric trends follow Figure 1. A snapshot of each individual metric is detailed, noting the change between quarters and any changes to systems that could result in potential impacts (for example, infrastructure outages or patches as well as new capabilities such as the joint HIE).

Figure 1 – Q1 FY2022 HDI Metrics Dashboard



Q1 Highlights: Metrics with a notable change in Q1 FY2022 from Q4 FY2021 are per Table 1 below. Table 1 – Quarter Highlights

Table 1 – Quarter Highlights

Metrics with a Notable Change in Q1 FY2022	Quarterly Delta	Supporting Information
VA Joint Longitudinal Viewer (JLV) Operational Availability [Metric A.6]	1.57% decrease from a quarterly total of 96.81% in FY21 Q4	The decrease in VA JLV Operational Availability was primarily due to an ongoing DOD Data Exchange Service (DES) issue that was finally resolved on December 10. DOD DES is the data feed to JLV for all DOD legacy data, community partner records and certain federal EHR data.
Joint Health Information Exchange (HIE) Transactions [Metric B.1]	5.26% decrease from a quarterly total of 164,806,876 in FY21 Q4	In October 2021, a firewall from the federal EHR vendor degraded document queries for eHealth Exchange hub partners. The issue started on the October 22, 2021 and the incident was officially closed on October 29, 2021. As a result, the number of joint HIE transactions dropped for the month of October.

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

1. **Joint Longitudinal Viewer (JLV).** The JLV, released in 2013, is a web-based graphical user interface that was 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 the DOD, VA and Virtual Lifetime Electronic Record (VLER) eHealth Exchange civilian partners within a single application. JLV retrieves clinical data from several 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. 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 or clinic, or VA Medical Center.
3. **DOD Clinical Data Repository/VA Health Data Repository (CHDR).** CHDR enables DOD and VA to exchange computable outpatient pharmacy and drug allergy information for shared patients. To achieve computable interoperability, each clinical component data is first standardized to a mutually agreed upon mediating vocabulary that both systems comprehend, and provide decision support, such as drug-allergy or drug-drug interaction checks.
4. **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.

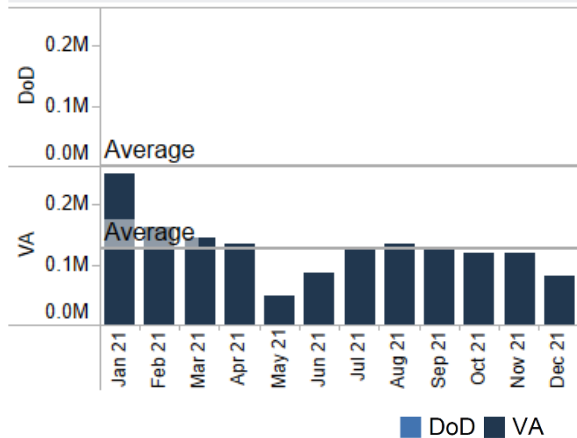
5. **Federal EHR.** Beginning in 2017, DOD Initial Operational Capability (IOC) sites in the Pacific Northwest went live with MHS GENESIS (DOD's name for the federal EHR). Subsequent deployments of MHS GENESIS include Waves TRAVIS (Q4 FY2019), NELLIS (Q4 FY2020), PENDLETON (Q1 FY2021), SAN DIEGO (Q2 FY2021), CARSON+ (Q3 FY2021), and TRIPLER (Q4 FY2021). In October 2020, the federal EHR went live at the first VA IOC sites in the Pacific Northwest and Nevada. VA recently resumed its deployment activities after a strategic review. The US Coast Guard (USCG) deployed the Federal EHR to four pilot sites in the Sacramento and San Francisco Bay area in August 2020. Subsequently, all ashore and afloat Coast Guard clinics and sickbays are serviced by the Federal EHR after deployments in the Pacific (August 2021) and Atlantic Areas (November 2021). End-user metrics regarding the federal EHR will be reported jointly for DOD, VA and USCG in subsequent reports.

The FEHRM, DOD and VA continue to expand HDI by improving upon the more than 5.5 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, 2021.

Category A: 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.

Legacy Viewer System (LVS) Health Record Queries

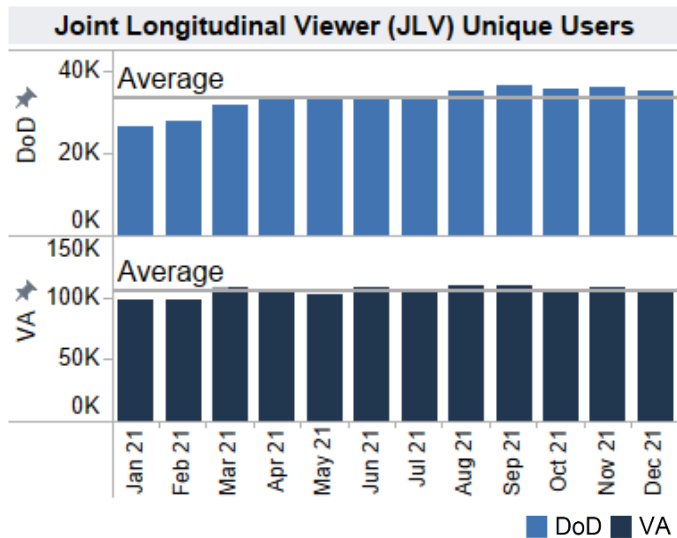


Metric A.1: Legacy Viewer System (LVS) Health Record Queries

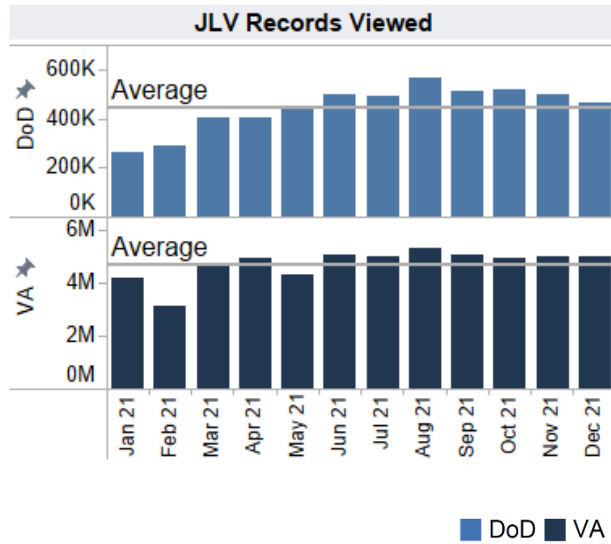
Definition

Total number of health record queries made by DOD and VA to the Federal Health Information Exchange/Bidirectional Health Information Exchange (BHIE) Framework database using VistA Web and the Computerized Patient Record System (CPRS) Remote Data View in each month

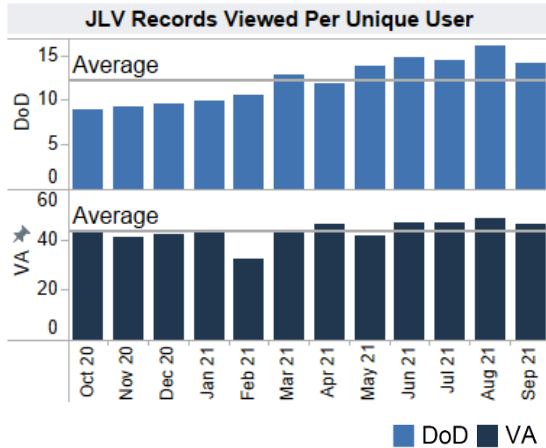
DOD	Change	Impact Factors
■	DOD discontinued use of the LVS in April 2019, so there are no changes.	The DOD implemented the Agile Core Services/Data Access Layer integration with Data Exchange Service in April 2019 and discontinued use of the LVS.
VA	Change	Impact Factors
▼	The total number of health record queries decreased by 17.09 percent between the fourth and first quarters to 320,477 queries.	The quarterly total remains within expected levels after an issue was corrected in June 2021 that had been caused by a VistA patch install at clinical sites in April 2021. The April 2021 VistA patch resulted in a significant drop in queries from VA clinicians seeking access to DOD patient data.



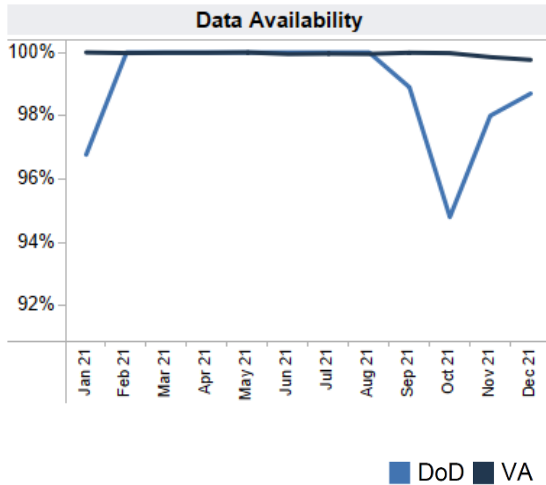
Metric A.2: JLV Unique Users		
Definition		
Monthly average number of active unique users (i.e., a user who has logged on during a specific month) recorded by the JLV for DOD and VA		
DOD	Change	Impact Factors
▲	The average monthly number of active JLV users increased by 1.39 percent between the fourth and first quarters to 35,555.	There are no factors of note.
VA	Change	Impact Factors
▼	The average monthly number of active JLV users decreased by 1.59 percent between the fourth and first quarters to 107,095.	There are no factors of note.



Metric A.3: JLV Records Viewed		
Definition		
Monthly total number of patient records viewed using the JLV for DOD and VA		
DOD	Change	Impact Factors
▼	The total quarterly number of JLV records decreased by 5.75 percent between the fourth and first quarters to 1,480,531.	There are no factors of note.
VA	Change	Impact Factors
▼	The total quarterly number of JLV records viewed decreased by 3.34 percent between the fourth and first quarters to 14,934,856.	There are no factors of note.



Metric A.4: JLV Records Viewed Per Unique User		
Definition		
Monthly average number of patient records viewed using the JLV for DOD and VA per active unique user		
DOD	Change	Impact Factors
▼	The average monthly number of JLV records viewed per unique user decreased by 7.08 percent between the fourth and first quarters to 13.88.	There are no factors of note.
VA	Change	Impact Factors
▼	The average monthly number of JLV records viewed per unique user decreased by 1.77 percent between the fourth and first quarters to 46.49.	There are no factors of note.



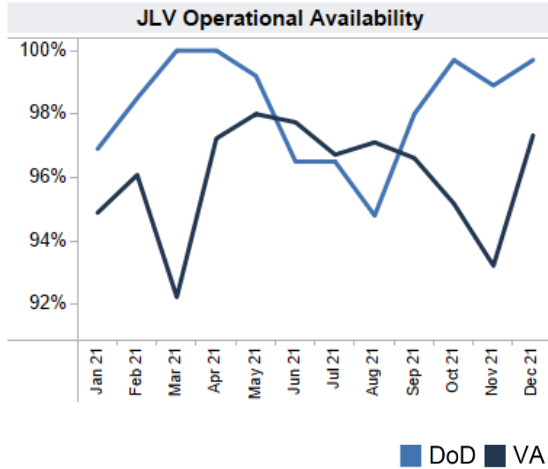
Metric A.5: Data Availability

Definition

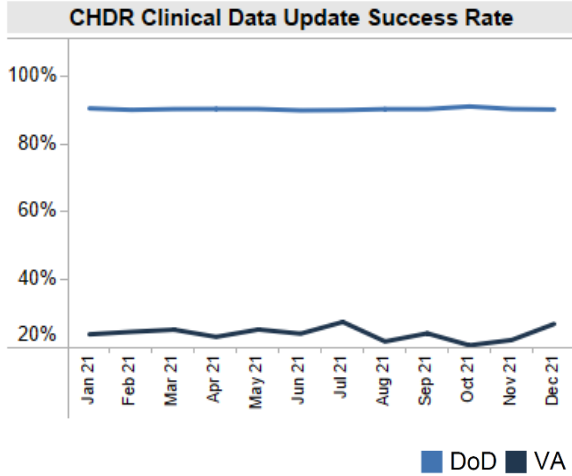
DOD – The percentage of time the Data Exchange Service is available on the data server for all the sites located in the data centers in support of DOD-to-VA HIE

VA – Percentage of time during the month that VistA Data Services was operational (i.e., with no errors and available to both DOD and VA users) in all JLV environments (i.e., Earth Observation Cloud, Non-Secure Internet Protocol Router and Medical Community of Interest)

DOD	Change	Impact Factors
▼	The average monthly data availability decreased by 2.46 percentage points between the fourth and first quarters to 97.17 percent.	There are no factors of note.
VA	Change	Impact Factors
▼	The average monthly data availability decreased by 0.10 percentage points between the fourth and first quarters to 99.87 percent.	There are no factors of note.



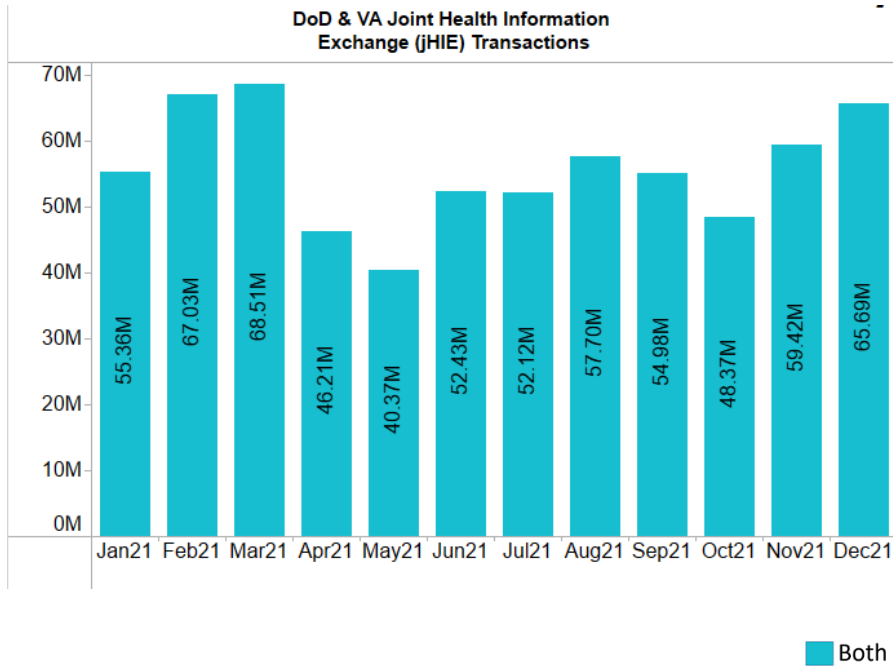
Metric A.6: JLV Operational Availability		
Definition		
The percentage of time during the month that the JLV was available for log in and functionally operational by DOD and VA users (i.e., available for users to conduct a patient search and to access both DOD and VA EHR data in the cloud environment)		
DOD	Change	Impact Factors
▲	The average monthly operational availability increased by 3.00 percentage points between the fourth and first quarters to 99.43 percent.	There are no factors of note.
VA	Change	Impact Factors
▼	The average monthly operational availability decreased by 1.57 percentage points between the fourth and first quarters to 95.24 percent.	The decrease in VA JLV Operational Availability was primarily due to an ongoing DOD Data Exchange Service (DES) issue that was finally resolved on December 10 th . DOD DES is the data feed to JLV for all DOD legacy data, community partner records, and certain federal EHR data.



Metric A.7: CHDR Clinical Data Update Success Rate from DOD to VA and VA to DOD		
Definition		
Percentage of CHDR clinical update messages with data (allergy or pharmacy) successfully processed (a successful process occurs when the sending agency receives a response from the receiving agency indicating successful receipt, translation and storage of clinical data)		
DOD	Change	Impact Factors
▲	The average monthly CHDR clinical data update success rate had an increase of 0.34 percentage points from 90.21 percent in quarter four to 90.55 percent in quarter one.	There are no factors of note.
VA	Change	Impact Factors
▼	The average monthly CHDR clinical data update success rate had a decrease of 1.23 percentage points from 24.55 percent in quarter four to 23.32 percent in quarter one.	The DOD CHDR team is in the process of releasing a commercial off-the-shelf version of their product, which is intended to correct the response issue.

Category B: 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.



Metric B.1: 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

DOD/VA

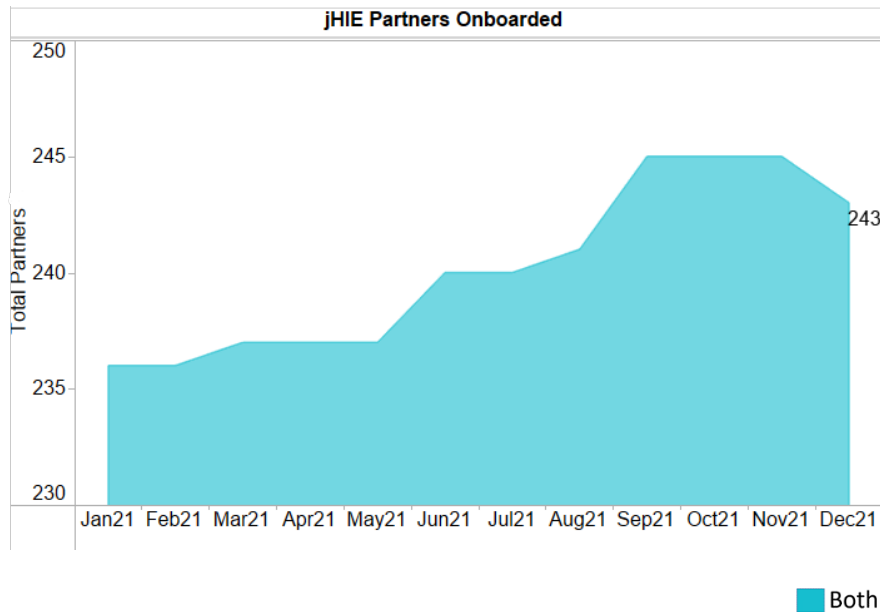
Change

Impact Factors



The total number of joint HIE transactions increased by 5.26 percent between the fourth and first quarters to 173,471,651.

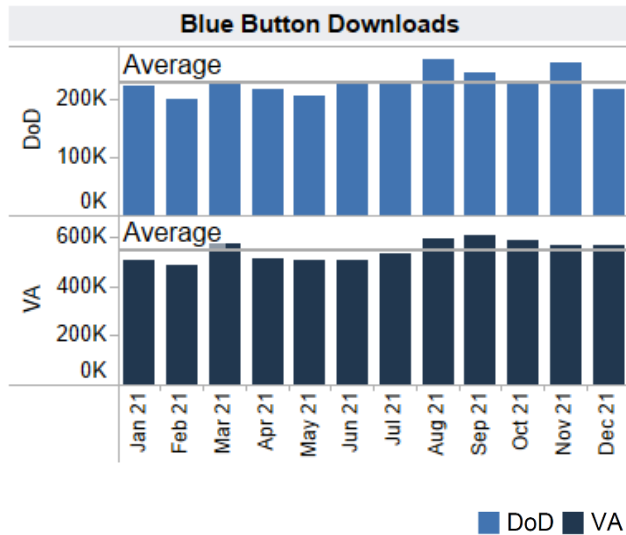
In October 2021, a firewall from the federal EHR vendor degraded document queries for eHealth Exchange hub partners. The issue started October 22 and the incident was officially closed on October 29. As a result, the number of joint HIE transactions dropped for the month of October.



Metric B.2: 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)		
DOD/VA	Change	Impact Factors
▼	Three additional joint HIE partners were onboarded and five joint HIE partners were offboarded between the fourth and first quarters, bringing the total to 243.	There are no impact factors of note.

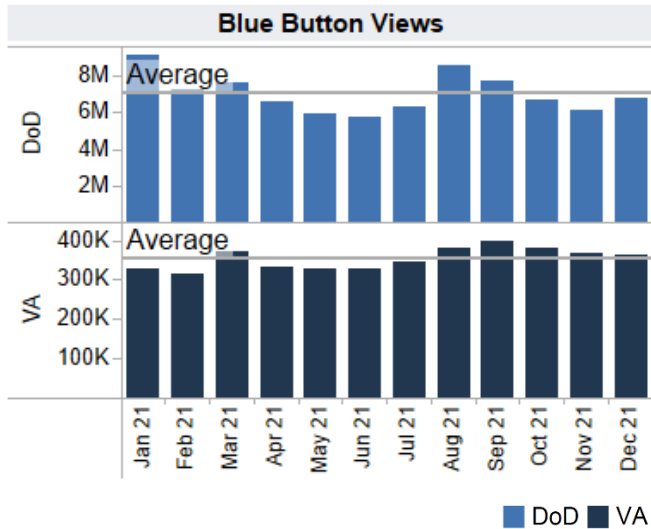
Category C: Patient Engagement

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.

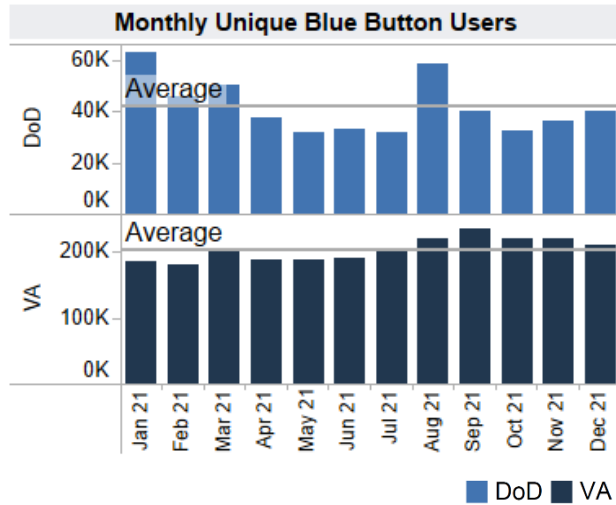


Metric C.1: Blue Button Downloads

Definition		
Total number of data downloads (e.g., PDF, text) generated by end users per month		
DOD	Change	Impact Factors
▼	The total quarterly number of Blue Button downloads decreased by 4.55 percent between the fourth and first quarters to 710,001.	There are no factors of note.
VA	Change	Impact Factors
▼	The total quarterly number of Blue Button downloads decreased by 0.97 percent between the fourth and first quarters to 1,719,127.	There are no factors of note.



Metric C.2: Blue Button Views		
Definition		
Average number of views generated by end users per month		
DOD	Change	Impact Factors
▼	The average quarterly number of Blue Button views decreased by 13.18 percent between the fourth and first quarters to 6,560,835.	There are no factors of note.
VA	Change	Impact Factors
▼	The average quarterly number of Blue Button views decreased by 1.34 percent between the fourth and first quarters to 369,337.	There are no factors of note.



Metric C.3: Monthly Unique Blue Button Users		
Definition		
Number of unique Blue Button users within a month		
DOD	Change	Impact Factors
▼	The average monthly number of Blue Button unique users decreased by 1.08 percent between the fourth and first quarters to 216,574.	There are no factors of note.
VA	Change	Impact Factors
▼	The average monthly number of Blue Button unique users decreased by 16.51 percent between the fourth and first quarters to 36,232.	There are no factors of note.