



**FEDERAL ELECTRONIC  
HEALTH RECORD  
MODERNIZATION**



# FEHRM

## Interoperability Progress Quarterly Report

SECOND QUARTER, FISCAL YEAR 2022

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## Interoperability Metrics

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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

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- **FEHRM Office:** During the second quarter of FY2022 (Q2 FY2022), the FEHRM continued to prioritize 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, 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.

- **Mitigating Issues Identified during the 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. The summit allowed end users to provide valuable feedback to FEHRM, DOD and VA leadership.

During Q2 FY2022, the FEHRM continued its work addressing this user-provided feedback with the training and configuration teams of Defense Health Agency Health Informatics (DHA HI), DoD Healthcare Management System Modernization, Veterans Health Administration (VHA) and Electronic Health Record Modernization Integration Office (EHRM IO) to mitigate, solve or highlight training items identified during the summit. During the Federal EHR Annual Summit 170 items/comments were identified, 130 were closed or resolved during the session, and 40 were routed to FEHRM team for coordination and resolution. To date, 39 of these items are now closed, one remains open and six were identified as long-term projects for continued tracking by the FEHRM Content and Configuration team.

- **HealthRegistries:** During the second quarter of FY2022, the FEHRM continued to implement the clinical registry solution HealthRegistries for users of the federal EHR across DOD. The FEHRM implemented the Pediatric Wellness and Maternity Registry and constituent measures. HealthRegistries tracks, manages and promotes quality measures for improved health outcomes across the DOD and VA beneficiary population, attributing healthy populations and those with chronic conditions into manageable cohorts. It includes five key feature areas: 1. Workflow Integration, 2. Health Maintenance Recommendations, 3. Registries, 4. Scorecards and 5. Analytics. Clinical data outcomes are shared to HealthRegistries via the HealthIntent platform longitudinal record, which orchestrates care to more than 11.9 million clinically managed patients.
- **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.

In Q2 FY2022, the JSaAB approved 487 items; including 59 daily go-live items that surfaced during Wave BAMC, HOOD/BRAGG and Walla Walla, and five items related directly to the COVID-19 response. The FEHRM coordinates an e-JSaAB process for urgent and emergent issue resolution during off-hours, and this e-JSaAB process was successfully used 30 times during Q2 FY2022.

Additionally, the FEHRM manages the Functional Decision Group (FDG), which is a body of senior clinical, business and health informatics leaders from EHRM IO, VHA and DHA. The FDG reviews, analyzes and decides on critical joint 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 third 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 an effort to establish a much needed, high-impact joint DOD/VA Federal Oncology Working Group (FOWG) to address joint oncology workflows and therapeutic treatment regimens.

The 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 the user experience is consistent across the common platform.

- **End-User Engagement:** During the reporting period, the FEHRM collaborated with DOD and VA patient and clinician satisfaction SMEs (joint workgroups [WG]) 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. Through these efforts, the survey instruments established and are/will be utilized 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 (CAHPS-HIT) were collectively selected and successfully incorporated into the Q3 FY2021 surveys for both DOD and VA. Since the CAHPS-HIT item set was deployed in Q3 FY2021, the HIT item set has received approximately 2,800 responses from DOD legacy and federal EHR deployed sites. Survey deployment to VA sites with the federal EHR was slightly delayed due to integration and deployment of the federal EHR, and data/results began to be received during Q2

FY2022. The FEHRM team will analyze data for both DOD and VA and bring back to the joint WG for review.

The Joint EHR Clinician Satisfaction Survey (KLAS) question set will be executed in FY2022. Jointly established questions will be deployed across DOD and VA, and KLAS Arch Collaborative provides benchmark data from other Cerner clients across the U.S. and abroad. The data and results will be reviewed by the joint WG and analyzed for shared trends between DOD and VA. The Departments plan to execute the survey in Q3/Q4, with results available for FEHRM analysis by end of Q4 FY2022.

- **Joint Functional Enhancements and New Requirements Management:** In Q2 FY2022, the FEHRM presented to the FDG a briefing of record proposing a course of action for a joint functional requirements development process. The FDG unanimously approved moving forward with the FEHRM's preferred course of action (COA), "COA #1- Enlist the FDG for Prioritization of Joint Requirements."

The high-level approach of COA #1 includes utilizing the FDG to prioritize joint requirements across the federal EHR. The joint functional requirements process begins when submitted enhancement requests are deemed viable by either Department and ends after the FDG approves the requirements for handoff to the Departments' PMOs for funding and solution development activities.

The newly created FEHRM Functional Requirements Workstream will support the Departments and FDG with implementation and maintenance of the new role of the FDG. Initial kick-off goals include establishing a meeting cadence, developing business rules and creating process artifacts, all based on Departmental needs and inputs.

- **FEHRM Revenue Cycle/Business Processes:** In Q2 FY2022, the FEHRM obtained executive leadership approval of three ambulatory Referral Management Standard Interim-State Enterprise Joint Process Maps (ISEJPMs) to depict referrals of DOD patients to VA services (from DOD MHS GENESIS EHR to the VA Legacy EHR). The team closely collaborated with the DOD and VA Business Functional Champions, DHA Unified Business Office (UBO), DHA Patient Administration (PAD), VA and DOD Referral Management Working Group, DOD/VA Sharing Office, VA/DOD Health Affairs Medical Sharing Office, VHA Office of Community Care and VHA Office of Finance and Revenue Operations to develop the following:
  - Scenario #1: Emergency Self-Presentation Authorization
  - Scenario #2: Non-Collocated Facilities with DHA Managed Care Support Contractor (MCSC)
  - Scenario #3: Collocated Site – Authorization generated by DHA MCSC



In Q3 FY2022, this group will complete the development and obtain executive approval of joint inter-departmental billing requirements.

- **Joint Enclave Data Management:** During the Q2 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 code sets, terminology and data and analytics governances.

In Q2 FY2022, the Executive Data Management Board (EDMB), which functions as the formal Data Management and Governance of FEHRM Data Assets, was chartered on March 17, 2022. 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 Analytics Governance Board (AGB), respectively. The DGB and AGB charters were executed. EDMB Co-Chairs designated their representative DGB and AGB board members.

Further, integrated processes and workflows were established 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 (IBM JAZZ).

In Q2 FY2022, the Federated Interagency Terminology Service (FITS) continued to engage with the vendor and Departments to jointly review and manage critical terminology projects. Fourteen project or issue proposals were submitted, seven were approved by the FITS. A proposal for a fifteenth project, FITS015 COVID-19 Lab Test (LOINC) and Specimen Source (SNOMED-CT) Mapping is in progress. The FEHRM terminologists also continue to monitor and normalize Joint Longitudinal Viewer (JLV) and Clinical Data Repository/Health Data Repository (CHDR) legacy and federal EHR clinical domains such as medication status (FITS011), allergens, medications, labs and document types.

- **Federal Enclave Management:** The FEHRM continued driving regular joint technical activities including Environment Management Operations Center (EMOC) sessions focused on the Enclave, in partnership with DOD, VA and USCG program offices, their prime vendors and key stakeholders responsible for segments of the federal EHR ecosystem. In Q2 FY2022 those activities included Continuity of Operations/Disaster Recovery Testing and Joint Functional Patient Safety issue sessions.

Consistent with the FEHRM's charter mandate to identify opportunities for efficiency and system optimization, the FEHRM continues to work with stakeholders to identify and track Enclave measures that were also included in the Interoperability Modernization Strategy. In Q2 FY2022, the FEHRM designed 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. In Q3 FY2022 the FEHRM will maintain and update the monthly health report and use that report to conduct trend analysis.

The FEHRM is also working with 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 Q2 FY2022, the FEHRM drove process review sessions with DOD and VA SMEs to document the comprehensive repeatable federal process for domain management. Also, during Q2 FY2022, the FEHRM established recurring touchpoints with key Departmental and commercial stakeholders to continue refining the federal domain management strategy and improving adherence to agreed-upon processes and conflict resolution. In Q3 FY2022, the FEHRM will complete a Domain Management Governance Guide to specify the roles, responsibilities and processes for managing the domains supporting the federal EHR, ensuring that execution is done at the lowest levels and that escalation for decisions is by exception and not the norm.

- **Federal Software Release Management:** In Q2 FY2022, the FEHRM continued to engage with the Departments' PMOs to plan for Capability Block 7 (CB7), which is slated for release in Q4 FY2022. Also, in Q2 FY2022, the FEHRM continued working with the Departments' PMOs to ensure a canonical nomenclature is documented and adhered to throughout the enterprise. As a part of this effort, the FEHRM refined and documented the repeatable process, which was shared with key Departmental and commercial stakeholders, to reach consensus.

During Q2 FY2022, the FEHRM executed a discovery exercise to understand and document the current as-is process for release management for both DOD and VA. In Q3 FY2022, this transformation will continue as the FEHRM drives analyses to refine the federal release management process. Also, in Q3 FY2022, the FEHRM will formalize this process through the execution of the Federal Release Management Plan, to minimize downstream impact to the Federal Enclave/Ecosystem. The FEHRM expects final documentation of the Federal Release Management Plan to be completed by the end of Q4 FY2022.

- **Federal Configuration Control Board (FCCB):** The FEHRM works with the DOD and VA PMOs to transform the current Joint CCB process into the FCCB process, which will ensure every change to the federal EHR's baseline has consistent design, engineering and test rigor applied to it by every organization leveraging the federal EHR and supporting infrastructure. In Q2 FY2022, the FEHRM drafted a charter for the FCCB. Also, during Q2 FY2022, the FEHRM analyzed the coordination between the FCCB and the Joint Sustainment and Adoption Board (JSaAB) to ensure the flow of actions between these execution process areas is optimized. In Q3 FY2022, the FEHRM anticipates finalizing the FCCB charter.

- **Unified Patient Experience:** The FEHRM is analyzing the Departments' patient portals to understand and work toward a secure and seamless experience for the patient population. During Q2 FY2022, the FEHRM performed a comprehensive analysis of the existing patient portals to assess their content, capabilities, architecture and growth opportunities. In Q3 FY2022, the FEHRM will complete this analysis and provide the federal EHR stakeholders a strategy and roadmap for unifying their patients' interactions with the federal EHR.
- **Continuous Business Operations:** Currently the federal EHR is relied upon to document and support the care of over 4.5 million DOD, VA, and USCG patients – a number that continues to grow as the federal EHR deploys to more sites. Given the criticality of this mission, the FEHRM works with the Department PMOs and their commercial partners to ensure the federal EHR can be relied upon in the unlikely event the primary data center suffers a catastrophic disaster. During Q2 FY2022 the FEHRM worked with the Department PMOs to complete a comprehensive review of key program documentation and deliverables to ensure the fail over capability delivered by the vendors is thoroughly tested, consistent with their contracts. Looking ahead, in Q3 FY2022 the FEHRM will establish goals and objectives for expanding the aperture to include business continuity planning. Also in Q3 FY2022 the FEHRM will provide the Departments' PMOs with recommendations for revising their contracts to more thoroughly demonstrate the federal EHR can be relied upon under even the most extraordinary set of circumstances.
- **Identity, Credential and Access Management (ICAM):** Ensuring the right party has the right access to the right system at the right time is a foundational requirement for the federal EHR. During Q2 FY2022, the FEHRM continued to coordinate with technical stakeholders from DOD, VA and the commercial sector to evaluate four potential solutions driving a shared unique identifier for DOD, VA, USCG and other future federal partners. The DOD/VA Information Technology Executive Committee (ITEC) will determine which course of action to pursue and provide that recommendation to the Joint Executive Committee (JEC) in Q3 FY2022. A Joint Technical Session to discuss the impacts of ICAM initiatives on the federal EHR will be hosted by the FEHRM in Q3 FY2022 with senior leaders from DOD, VA, USCG and private sector partners.
- **Enterprise Operations Center (EOC):** The EOC is a critical component of operationalizing the FEHRM. The EOC prepares the federal EHR system partners and ecosystem colleagues 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 Q2 FY2022, the EOC provided joint executive level briefings for DOD and VA go-live events. 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 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 federal EHR meets the interoperability performance standards outlined in NDAA FY2020, and collaborating with DOD, VA and USCG to establish a multiphase approach for controlling the creation test/pseudo records in the Federal Enclave.

In Q2 FY2022, the FEHRM continued with 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 complete the Phase 0 assessment, which included the context of how the Federal Enclave interacts with the full ecosystem. This work leveraged prior assessments conducted by DOD and VA. The FEHRM also worked with DOD and VA to identify a schedule-dependent level 4 joint sharing site—Anchorage, Alaska—to host the Phase I evaluation of requirements as outlined in the FY2020 NDAA.

Also, during Q2 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 continued working with DOD and VA to ensure their respective draft policies are aligned with respect to key processes and standards, which are routed by each agency for formal approval. The FEHRM formally chartered a governance body to manage the proliferation and use of test/pseudo records. Lastly, the FEHRM collaborated with all three Departments to establish a system flag that mitigates the risk of collocating test/pseudo records in the production environment.

- **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 federal EHR to include prevention, detection, escalation and response coordination. In Q2 FY2022, the FEHRM conducted the second of three planned tabletop sessions focused on surfacing communication gaps between various stakeholders. A third table-top exercise will be held before the end of FY2022.
- **Cybersecurity – Joint Incident Management Framework:** Foundational to the cybersecurity posture of the federal EHR is documenting and optimizing a framework for responding to an escalating cybersecurity incidents, jointly. In Q2 FY2022, the FEHRM worked with stakeholders to finalize a draft incident management framework and

associated processes to include a ransomware communications guide for joint responses to cybersecurity incidents impacting the Federal Enclave. This is based on the existing incident management frameworks for each Department. In Q3 FY2022, the FEHRM will begin working on a standard operating procedure for cyber incident response.

- **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. In Q2 FY2022, the FEHRM began analyzing a roadmap for evolving from the current defense in depth to a zero trust architecture.
- **Joint Sharing Sites (JSS) Implementation Support:** In Q2 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 VA EHRM IO PMOs) to resolve issues (e.g., end-user provisioning) associated with DOD EHR deployment at Womack Army Medical Center (AMC)-Fayetteville VA Medical Center (VAMC).

The FEHRM, alongside its DHA HI and VHA Office of Health Informatics partners, evaluated the nature of shared clinical services at joint sharing sites in DOD Wave HOOD and Wave BRAGG to identify potential risks due to asynchronous deployment. In particular, the Joint Workflow Assessment Working Group (JWA WG) conducted a thorough analysis of Womack AMC joint inpatient dialysis implementation status and potential patient care location (PCL) considerations/courses of action, as well as the VA MRI trailer installation at Tinker Air Force Base. The JWA WG will monitor these implementation plans during the asynchronous window between DOD and VA EHR deployments at these facilities. The FEHRM also provided post-deployment support to DOD Wave HOOD and Wave BRAGG joint sharing sites in Q2 FY2022.

Additionally, the FEHRM conducted initial information-gathering at highly-integrated joint sharing sites to support upcoming DOD go-lives for Wave BEAUMONT and Wave GORDON. In Q3 FY2022, the JWA WG will conduct and complete its assessment of clinical risks posed by asynchronous deployment at these facilities, and the FEHRM will continue to support these sites through DOD go-live in June 2022.

The FEHRM convened DOD and VA stakeholders, as well as the vendors (Cerner and Leidos Partnership for Defense Health) to evaluate enterprise PCL decision-making processes and their impact to EHR deployment at joint sharing sites as part of the FEHRM Risks, Issues, Opportunities (RIO) process. In Q2 FY2022, the vendors delivered three briefings on the problem statement, background and proposed courses of action. In Q3 FY2022, the vendors plan to deliver a briefing of record and agreed-upon courses of action to FEHRM, DOD and VA leadership.

Previously, in Q2 FY2021, Anchorage VAMC leadership flagged several unique clinical and business practices related to their sharing agreements with DOD facilities (including clinical workflows and data migration), along with the need for a coordinated plan to transition VA users from MHS GENESIS to the end-state federal EHR. In Q2 FY2022, TO33 was awarded by EHRM IO for the vendor (VA Cerner) to support this work, and the FEHRM remained engaged in summit meetings on the topics of Orders/Results, Workload Capture-MCA focus and Clinical Imaging Viewing/Storage. The vendor plans to present courses of action in Q3 FY2022.

- **Captain James A. Lovell Federal Health Care Center (FHCC) Federal EHR Implementation:** In conjunction with the EHRM PMOs, the FEHRM began execution of the Enterprise Requirements Adjudication (ERA) process in Q2 FY2022. Through this process, topics are identified that require a decision to deconflict build between DOD and VA and will inform the FHCC Federal EHR Implementation Plan. Following identification by the vendor, the FEHRM convenes key stakeholders and SMEs from the EHRM PMOs for a series of discussion sessions to agree upon a COA for the topic.

At the end of Q2 FY2022, a total of 79 topics were identified that will require adjudication through the process, prioritized as Primary, Secondary and Tertiary. There is a total of six topics prioritized as Primary, which are on the critical path for the FHCC Federal EHR Implementation Plan. The Primary topics are all on track to support the vendor's timeline for development of the Implementation Plan. Of the 79 total topics, 24 were submitted by the vendor to begin routing through the process and the FEHRM led discussion sessions resulting in 11 topics reaching a final decision. The ERA process is expected to continue into Q4 FY2022.

FEHRM leadership joined the VA-DOD Joint Executive Committee (JEC) Co-Chairs as well as DOD and VA representatives from Program Executive Office, Defense Healthcare Management Systems (PEO DHMS) and EHRM IO during an FHCC site visit on March 17, 2022. Together, they reviewed FHCC's EHR implementation status and outlined next steps in the effort.

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.

- **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 Q2 FY2022, the FEHRM supported the DOD's BAMC, LACKLAND, HOOD and BRAGG waves and the VA's go-live at Jonathan M. Wainwright Medical VAMC.

## **Joint Health Information Exchange (HIE)**

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DOD and VA deployed the joint HIE in April 2020 enhancing the ability of VA, DOD and USCG staff to bi-directionally exchange Service member, Veteran and other beneficiary health care data securely with community providers for purposes of treatment. By the end of this quarter, the joint HIE is connected to more than 65% of U.S. health care providers and facilities, delivered nearly 5 million documents to community partners, and retrieved 40 million documents from community partners every month. Future efforts include completing Social Security Administration integration, continuing expansion with community partners and external networks (CareQuality), coordinating private sector consent management portal and migrating towards Fast Healthcare Interoperability Resources (FHIR) based exchange.

## **Interoperability Modernization Strategy**

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The DOD-VA Interoperability Modernization Strategy (IM Strategy) is an effort to respond to the NDAA FY2020 request for the development of a "comprehensive interoperability strategy." The effort was divided into three phases: Strategic Goals and 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 completed its review of 20 initiatives and proposed 170 performance measures for further evaluation to assess their applicability to the strategy's four goals and 17 objectives. The final set of 38 performance measures is documented in the primary deliverable, the DOD-VA IM Strategy Performance Measurement Plan, which is being finalized. The Performance Measurement Plan proposes a follow-on activity focused on development of detailed performance measure specifications for a group of high priority initiatives, such as the Individual Longitudinal Exposure Record (ILER).

## **Individual Longitudinal Exposure Record**

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The Individual Longitudinal Exposure Record (ILER) is a web-based IT system that correlates the geographic location of toxic exposure events with the geographic location of Service members. ILER's principal product is the Individual Exposure Summary (IES): a list of deployments and potential exposures that each Service member may have sustained. ILER also has functionality for researchers that allows the assembly of groups of Service

members who sustained similar exposures—so their health records can be monitored for trends and new clinical practice guidelines can be constructed. ILER can also be used by benefit claims examiners as a source of evidence supporting a Veteran’s claim for benefits.

During Q2 FY2022, the FEHRM continued to support the implementation of ILER through five lines of effort:

- **Functional Requirements** – There is great interest in incorporating a patient’s exposure information into their clinical information stored in the federal EHR. The FEHRM leads a work group focused on the development of functional requirements for how ILER-derived exposure data could be viewed and used within the federal EHR.
- **National Standards for Exchange of Exposure Information** – The FEHRM leads a review of existing national standards relevant to exposure data structure and terminologies. The idea is that the use of national standards will a) move DOD and VA from a home-grown method of data exchange to one that is compliant with an open national standard, and b) improve the national standards with findings and shortcomings identified by DOD and VA.
- **Development of Performance Measures for ILER Implementation** – Successful implementation of ILER means satisfying the needs of numerous stakeholders. The FEHRM leads a work group focused on identifying the most important measures of progress—and specifying their details so they can be effectively reported.
- **Delivery of the IES to the JLV and the DOD and VA patient portals** – The NDAA FY2021 directed the VA Secretary to provide Veterans with access to their ILER information through a website. The FEHRM helps this effort by leveraging their success with a similar task: delivering the IES to clinicians via JLV.
- **Data Interface between ILER and the Common Federal EHR** – Incorporating ILER-derived exposure data into clinical workflows requires the data base to be sent to the common federal EHR. The FEHRM leads a work group focused on establishing the data interfaces required to communicate exposure data between ILER and the federal EHR.

## Interoperability Standards

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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 must come together for interoperability to realize effective health care delivery. The FEHRM 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 Health Level Seven (HL7) federal and industry partners and standards development organizations (SDOs) to advance national health data interoperability.

HL7 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 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 operate as extensions to the existing USCDI. In Q2 of FY2022, the FEHRM:
  - 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+; and
  - Successfully held working sessions with VA to focus on the initial phase and potential partnerships.
- **HL7 Engagements and Balloting:** HL7 Working Group Meetings allow federal agencies, stakeholders and the HL7 community to work on standards and to 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.

The FEHRM presented to the Unique Mobile Health Application Identifier (UMHAI) WG two use cases developed by staff from the Telemedicine & Advanced Technology Research Center (TATRC) and the FEHRM that will be used as inputs during the development of the UMHAI standard.

In Q2 FY 2022, the FEHRM hosted the HL7 Birds of a Feather meeting. The audience included 61 representatives from federal agencies, international consultants, insurance associations and industry groups. The presentation also focused on the role of standards in shaping the future of national and international cooperation and response, and overall health care equity. The FEHRM received positive feedback from multiple stakeholders

expressing their appreciation for a very valuable session. The FEHRM distributed the corresponding materials to attendees.

For the January 2022 HL7 ballot cycle, the FEHRM prioritized twelve ballots for six SMEs to review and to vote. These ballots directly impacted interoperability between DOD and VA as either high or medium priority. The FEHRM coordinated with VA and completed ballot reviews and submissions. The ballot cycle evaluation report was completed and distributed to FEHRM leadership.

Four ballots postponed from the January 2022 ballot were presented for review in March during an early May 2022 ballot cycle. After FEHRM SMEs completed their reviews, VA reviewers discovered new information the day before voting ended. The FEHRM SME prioritized this new information and validated VA's concerns (multiple errors in a data mapping table), leading to a negative vote on this ballot (affirmative votes on the other three ballots). FEHRM and VA aligned their votes accordingly.

For the normal May 2022 ballot cycle, the FEHRM prepared for and contributed to the ballot cycle by prioritizing four ballots for review, justifying the selection of ballots, assigning two SME reviewers and effectively coordinating with DOD, VA and FEHRM stakeholders. Votes are due on May 3, 2022. The FEHRM is hosting another Government Birds of a Feather meeting on May 11, 2022, during the HL7 working group meeting (May 9-13, 2022). The FEHRM is prepared to engage and influence standards development with key stakeholders and the HL7 community for the benefit of Service members, Veterans and beneficiaries.

- **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 Q2 FY2022, the FEHRM reconciled 80+ design comments 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 is posted for final review with HL7's membership and will formally publish in 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 analyzes 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 in Q2 FY2022:

- Da Vinci Burden Reduction initiative includes 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 focuses on subscriptions and the framework page for a detailed description of the technical workflow and Application Programming Interface (API) guidance.
- The FEHRM voted on the following HL7 Ballots:
  - HL7 FHIR IG: Coverage Requirements Discovery, Release 1 - US Realm
  - HL7 FHIR IG: Documentation Templates and Payer Rules (DTR), Release 1- US Realm
  - HL7 FHIR IG: Prior Authorization Support (PAS), Release 1- US Realm
  - HL7 FHIR® Implementation Guide: Payer Data Exchange (PDex), Release 2 - US Realm
- **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 activities for Q2 FY2022 include:
  - Collaborated with IEEE LSTC members in the promotion of telehealth equity.

- Engaged in IEEE P1752 Main Work Group meetings in the discussion of specific use cases from the Metabolic Subgroup with a focus on blood glucose monitoring and security requirements for Bluetooth.
  - Provided comments to the Mobile Health Work Group Protection, Safety and Security chapter of the proposed standard with respect to the definitions of Safety, Protection and Security and the overall reference architecture that organizes the Clinical Internet of Things (CIoT) standard.
  - Reviewed v3 draft of the Privacy Chapter of CIoT Standards and provided comments to the WG on Fair Information Practice Principles and the Health Insurance Portability and Accountability Act (HIPAA) that will govern the privacy module of CIoT devices.
- **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. This provided an opportunity for collaboration on a variety of projects regarding standards alignment and adoption.

## Federal and Industry Engagements

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FEHRM engagements with federal and key industry stakeholders are aligned with known priorities within DOD, VA and/or FEHRM, as defined by guidance documents including the NDAA, FEHRM Charter, Interoperability Modernization Strategy, VA/DOD Joint Executive Committee Strategic Plan, Federal Health IT Strategic Plan and ONC Interoperability Roadmap.

- **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.
- **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 USCDI and USCDI+ Workgroups. The following are key details of these interactions.

- Hosted the joint FEHRM-ONC-Centers for Medicare & Medicaid Services (CMS) meeting on February 22, 2022, where leadership shared current and planned activities and opportunities to enhance overall federal interoperability and engagements, and to explore collaboration opportunities.
  - Participated in the January, February and March 2022 HITAC meetings, which provided recommendations to ONC policies, standards, implementation specifications and certification criteria relating to implementation of the HIT infrastructure.
  - Participated in the January 31, 2022 HITAC Annual Report Workgroup meeting, which informed, contributed to and reviewed draft and final versions of the HITAC Annual Report, which is submitted to the Health and Human Services Secretary and Congress each fiscal year.
  - Participated in the January and March 2022 USCDI Data Strategy and Standards Harmonization WG meetings, which supported the process of data and object harmonization as a condition for data class advancement.
  - Participated in the monthly Trusted Exchange Framework and Common Agreement (TEFCA) RCE Monthly Informational Call and TEFCA RCE-sponsored Webinars that brought together representatives from multiple federal entities engaged in health IT policies, programs, and oversight.
  - Participated in ONC webinars on Electronic Prior Authorization (February 24, 2022) and ONC Artificial Intelligence Showcase on Seizing the Opportunities and Managing the Risks of Use of AI in Health IT (January 14, 2022).
- **Additional Q1 FY 2022 FEHRM engagements with key federal stakeholders included the following:**
    - Hosted a quarterly FEHRM Town Hall for more than 140 participants on January 24, 2022, where the FEHRM presented an update on the FHCC federal EHR implementation efforts. The FEHRM provided insight into the deployment phased approach and the ERA process and framework. ONC and CMS also provided program updates.
    - Participated in the monthly CMS Health Informatics and Interoperability Group - Interoperability and Standards Collaborative Forum, which convenes CMS, U.S. Department of Health and Human Services and other federal employees to collaborate, learn and elevate new ideas in healthcare interoperability and IT modernization.
    - Participated in the monthly VA Interoperability Leadership Internal and External Coordination Work Group, which supports improved interoperability across the VA through effective use of business and technology standards.
    - Continued participation in the CMS-sponsored Post-Acute Care Interoperability (PACIO) Workgroup and PACIO Project Advance Directive Use Case Subgroup established to create FHIR implementation guidance for advance directives information interoperability.



- Began formal comment coordination with the DOD and VA on the draft USCDI v3 and the Standards Version Advancement Process (SVAP), with comments due to ONC by April 30, 2022.
  - Provided the “Electronic Prior Authorization Standards, Implementation Specifications and Certification Criteria” to DOD, VA and FEHRM clinical SMEs for federal review.
- **Additional Q2 FY 2022 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 (SDOH) in standards and revision to the ICD-10 and USCDI. During this quarter, the Community Project focused on Health Literacy and the Medical Cost Burden and Health Insurance Status, which will be submitted for final evaluation and consensus voting in Q3 FY2022. The Technical FHIR workgroup focused on findings from the January 2022 HL7 Connectathon efforts and adjudication of the Implementation Guide.

## Conclusion

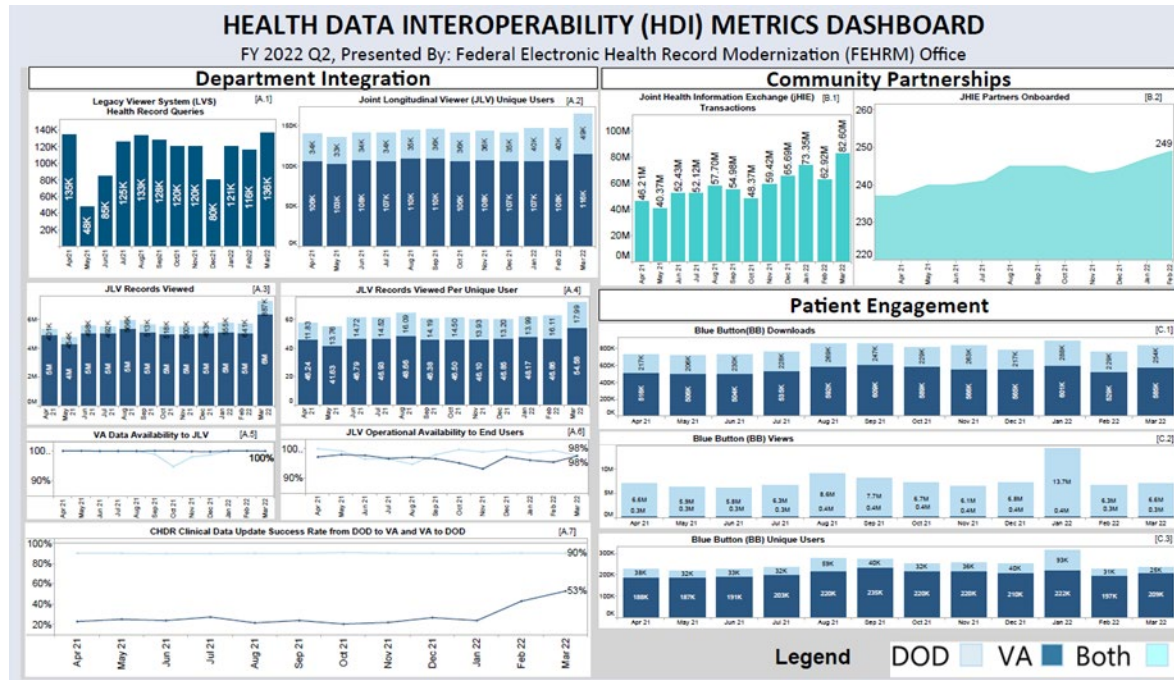
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Throughout Q2 FY2022, the Departments remained committed to measuring, assessing and enhancing health data interoperability with the single, common federal EHR as well as with their private sector partners who care for DOD, VA and USCG beneficiaries. 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 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 Q2 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 Q2 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 – Q2 FY2022 HDI Metrics Dashboard**



**Q2 Highlights:** Metrics with a notable change in Q2 FY2022 from Q4 FY2021 are captured in Table 1 below.

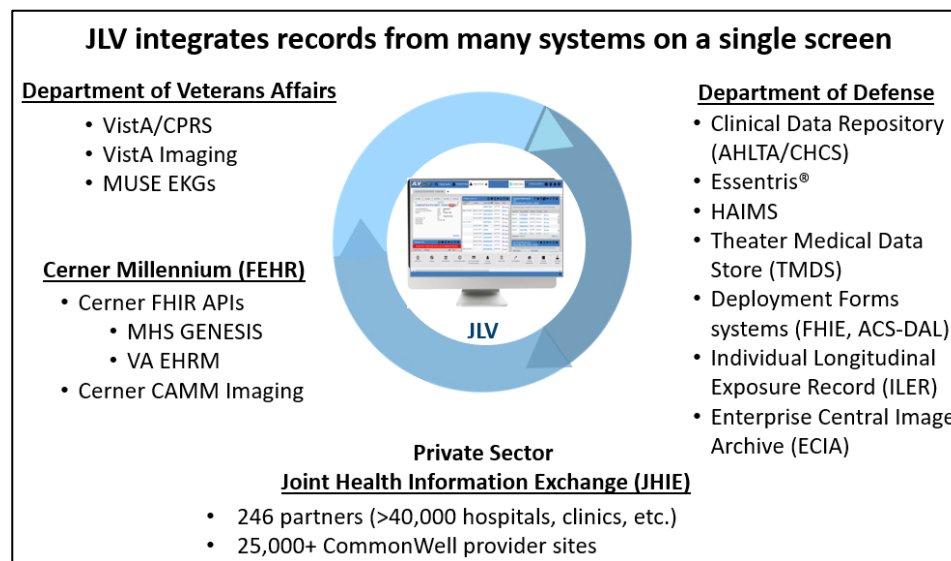
**Table 1 – Quarter Highlights**

<b>Metrics with a Notable Change in Q2 FY2022</b>	<b>Quarterly Delta</b>	<b>Supporting Information</b>
Metric B.1: Joint HIE Transactions	27.16% increase between the first and second quarters to 218,864,215 transactions	The increase in joint HIE transactions is most likely due to post-holiday increase in appointments, federal EHR deployments and the addition of six partners. CommonWell also may have added more partners in that time frame.
Metric C.3: Monthly Unique Blue Button Users	37.54% increase between the first and second quarters to 49,834 in the average number of active blue button users	The increase in DOD Blue Button usage was driven by the second strand of Covid, back to work/back to school testing and the increase in proof of vaccination requests.

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 DOD, VA and Joint Health Information Exchange 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. 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.

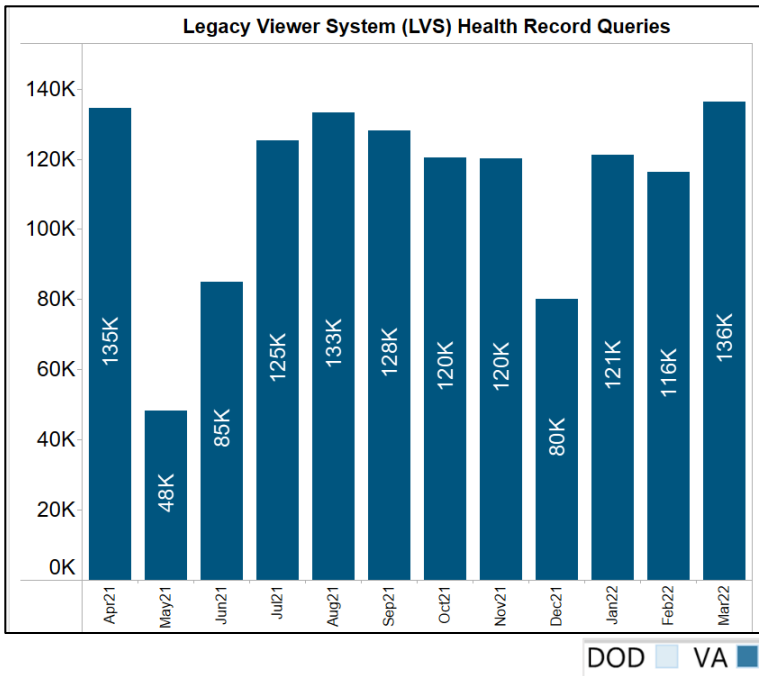
4. **Blue Button.** Blue Button enables patients from DOD and VA to access their personal health data from their EHR, including allergies; laboratory and radiology results; vital signs; and outpatient medications, problem lists and encounters. The new MHS GENESIS Patient Portal also allows TRICARE beneficiaries 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). Twelve DOD waves are live and four additional waves are going live in CY2022. The VA resumed federal EHR go-lives in March 2022 following a strategic review, and 10 additional VA sites are scheduled to go live in CY2022. 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 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 7 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 March 31, 2022.



### 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.

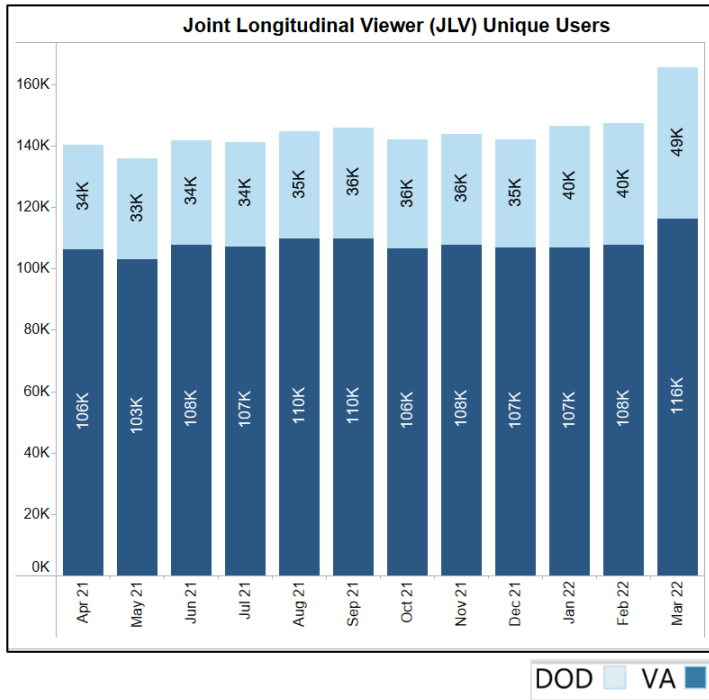


#### Metric A.1: Legacy Viewer System (LVS) Health Record Queries

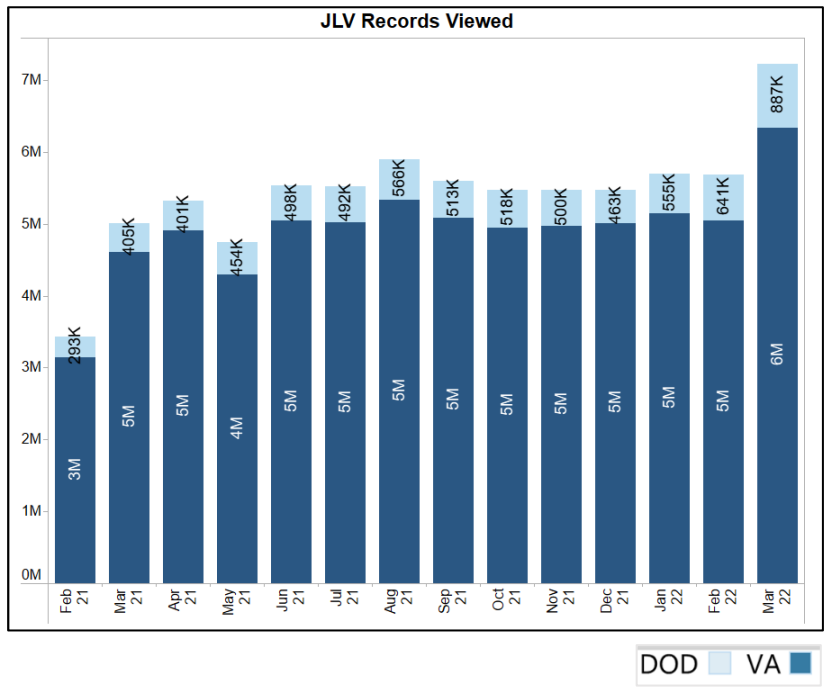
##### Definition

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 Computerized Patient Record System (CPRS) Remote Data View in each month.

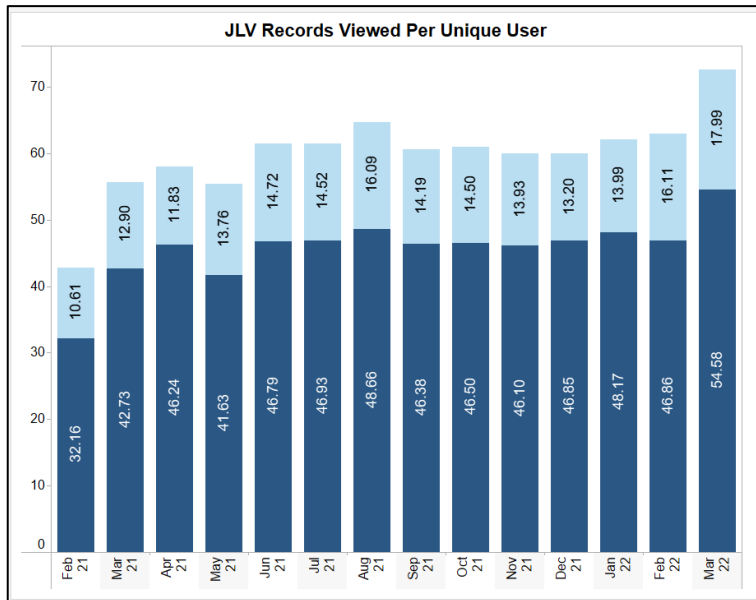
DOD	Change	Impact Factors
■	DOD discontinued use of the LVS in April 2019, so there are no changes.	The DOD implemented the Agile Core Services/Data Access Layer integration with Data Exchange Service in April 2019 and discontinued use of the LVS.
VA	Change	Impact Factors
▲	The total number of health record queries increased by 16.68 percent between the first and second quarters to 373,935 queries.	Since June 2021, VA clinicians have access to DOD clinical images. There has been a steady increase in usage since functionality was implemented. As end-user education as well as awareness and acceptance is spread through the VA clinical user community, metrics are expected to steadily increase. Infrastructure improvements to enhance response times were implemented, which is also leading to increased end-user acceptance and increased usage.



<b>Metric A.2: JLV Unique Users</b>		
<b>Definition</b>		
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.		
<b>DOD</b>	<b>Change</b>	<b>Impact Factors</b>
	The average monthly number of active JLV unique users increased by 20.70 percent between the first and second quarters to 42,916.	Increase in JLV unique users is likely due to the increase in training/on-boarding efforts on the MHS GENESIS side in preparation for and during the MHS GENESIS wave deployments.
<b>VA</b>	<b>Change</b>	<b>Impact Factors</b>
	The average monthly number of active JLV users increased by 2.88 percent between the first and second quarters 110,179.	There are no factors of note.



<b>Metric A.3: JLV Records Viewed</b>		
<b>Definition</b>		
Monthly total number of patient records viewed using the JLV for DOD and VA.		
<b>DOD</b>	<b>Change</b>	<b>Impact Factors</b>
▲	The total quarterly number of JLV records viewed increased by 40.68 percent between the first and second quarters to 2,082,818.	Increase in JLV monthly records viewed is likely due to the increase in training/onboarding efforts on the MHS GENESIS side in preparation for and during the MHS GENESIS wave deployments.
<b>VA</b>	<b>Change</b>	<b>Impact Factors</b>
▲	The total quarterly number of JLV records viewed increased by 10.65 percent between the first and second quarters to 16,525,588.	<p>An increase in records viewed is likely due to a requirement to institute a facility-wide standard process to identify, review and document medication and allergy information using any/all data sources (e.g., the patient, family, JLV) at every episode or transition in care where medications are involved was instituted.</p> <p>A notification highlighting why JLV is the go-to tool for interoperability and the only way to view complete records for patients who have received care outside the local site at another VA or DOD or community partner location was also instituted.</p>



DOD VA

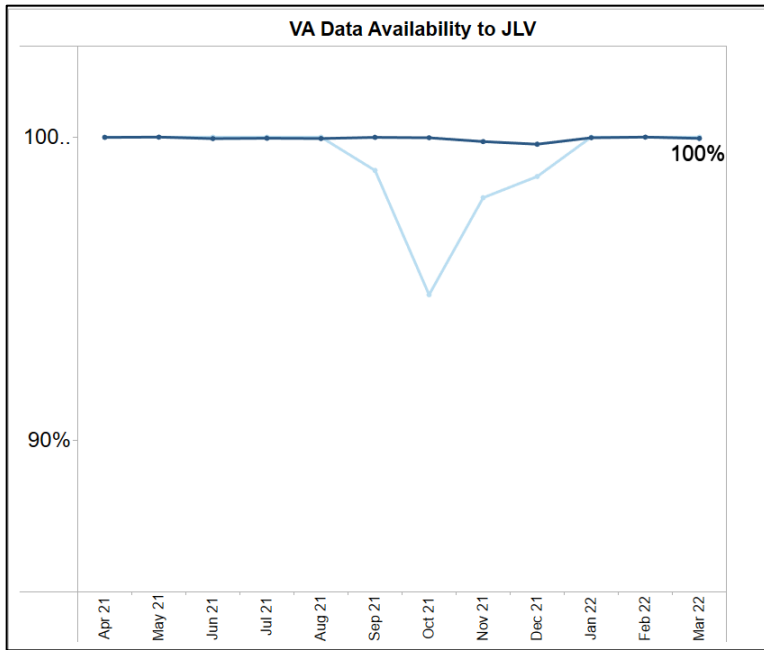
## Metric A.4: JLV Records Viewed Per Unique User

### Definition

Monthly average number of patient records viewed using the JLV for DOD and VA per active unique user.

Calculation: JLV Records Viewed divided by JLV Unique Users

DOD	Change	Impact Factors
	The average monthly number of JLV records viewed per unique user increased by 15.52 percent between the first and second quarters to 16.03.	Increase in JLV monthly records viewed per active unique user is likely due to the increase in training/on-boarding efforts on the MHS GENESIS side in preparation for and during the MHS GENESIS wave deployments.
VA	Change	Impact Factors
	The average monthly number of JLV records viewed per unique user increased by 7.28 percent between the first and second quarters to 49.87.	There are no factors of note.



DOD VA

### Metric A.5: VA Data Availability to JLV

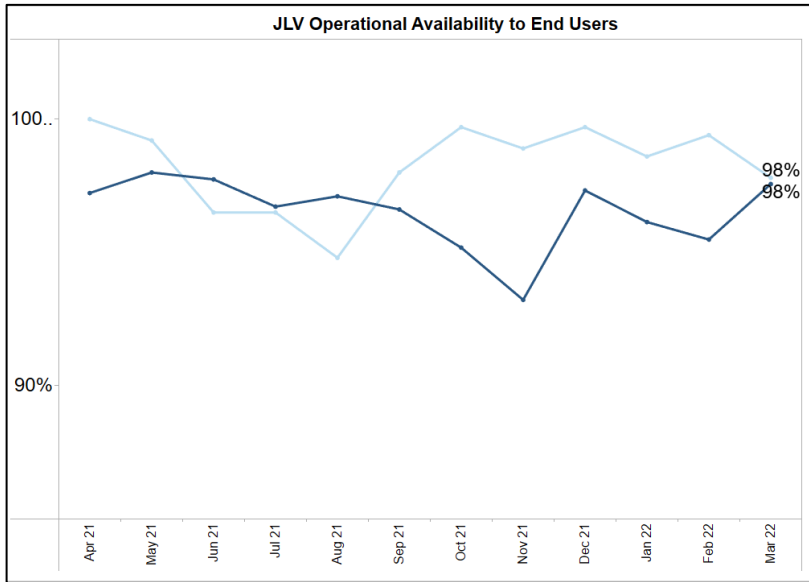
#### Definition

**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.

DOD	Change	Impact Factors
▲	The average monthly data availability increased by 0.03 percentage points between the first and second quarters to 100 percent.	There are no factors of note.
VA	Change	Impact Factors
▲	The average monthly data availability increased by .001 percentage points between the first and second quarters to 99.98 percent.	There are no factors of note.





DOD VA

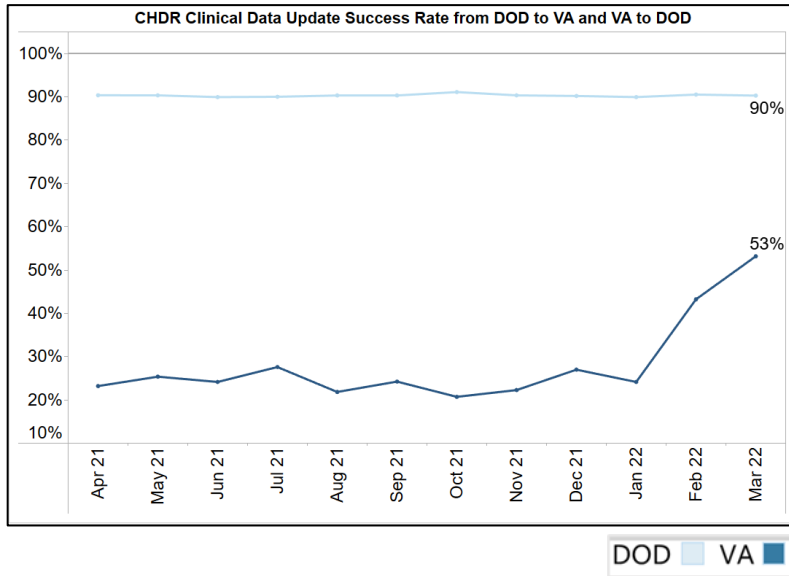
### Metric A.6: JLV Operational Availability to End Users

#### Definition

**DOD** – The percentage of time during the month that the JLV was available for login 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 (Cerner) EHR data in production environments.)

DOD	Change	Impact Factors
▼	The average monthly operational availability decreased by 0.01 percentage points between the first and second quarters to 98.60 percent.	There are no factors of note.
VA	Change	Impact Factors
▲	The average monthly operational availability increased by 0.01 percentage points between the first and second quarters to 96.40 percent.	There are no factors of note.



### Metric A.7: CHDR Clinical Data Update Success Rate from DOD to VA and VA to DOD

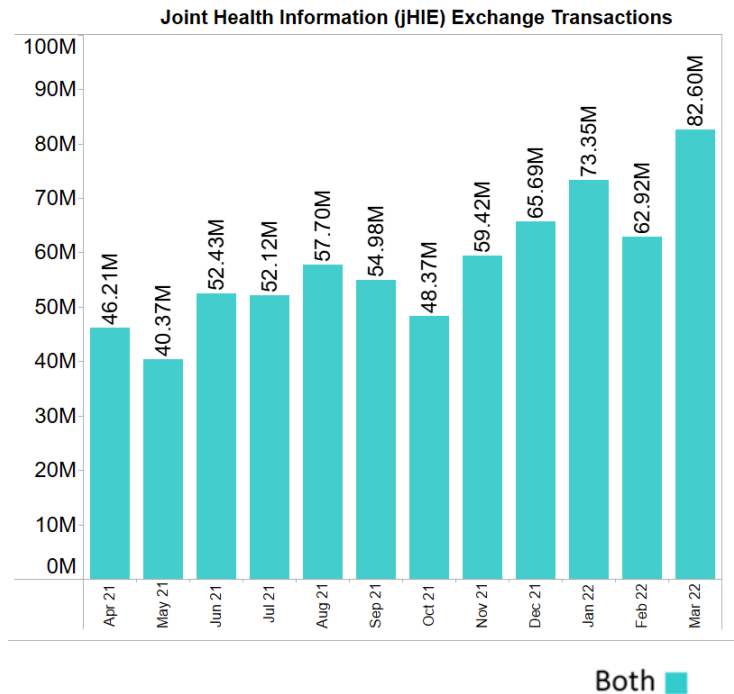
#### Definition

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 a decrease of 0.29 percentage points from 90.55 percent in quarter one to 90.25 percent in quarter two.	There are no factors of note.
VA	Change	Impact Factors
▲	The average monthly CHDR clinical data update success rate had an increase of 4.32 percentage points from 23.32 percent in quarter one to 27.52 percent in quarter two.	There are no factors of note.

### 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.

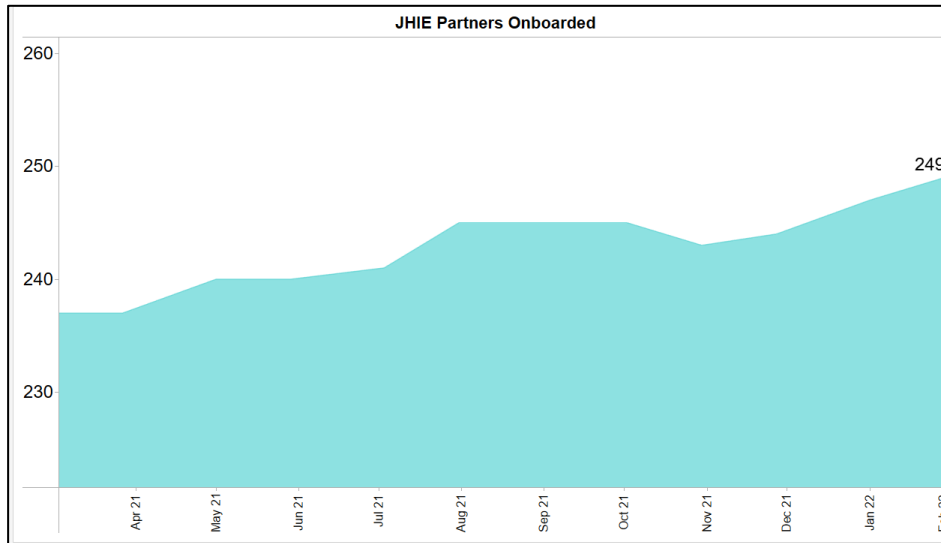


#### Metric B.1: Joint Health Information Exchange (joint HIE) Transactions


##### 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.

DOD/VA	Change	Impact Factors
	The total number of joint HIE transactions increased by 26.17 percent between the first and second quarters to 218,846,215.	The increase in joint HIE transactions is most likely due to post-holiday increase in appointments, federal EHR deployments, and the addition of six partners. CommonWell also may have added more partners in that timeframe.

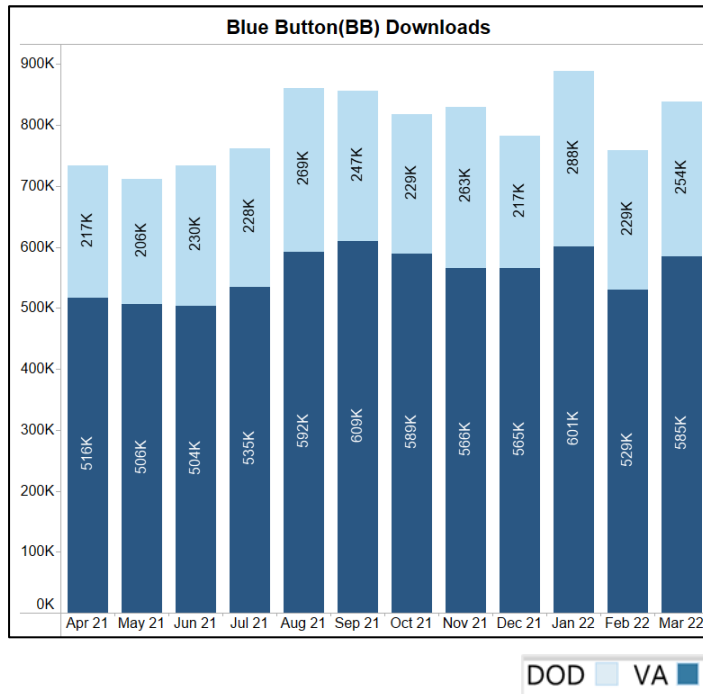


Both ■

<b>Metric B.2: Joint HIE Partners Onboarded</b>		
<b>Definition</b>		
<p>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).</p>		
<b>DOD/VA</b>	<b>Change</b>	<b>Impact Factors</b>
	<p>Six additional joint HIE partners were onboarded between the first and second quarters, bringing the total to 249.</p>	<p>There are no factors of note.</p>

### 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.

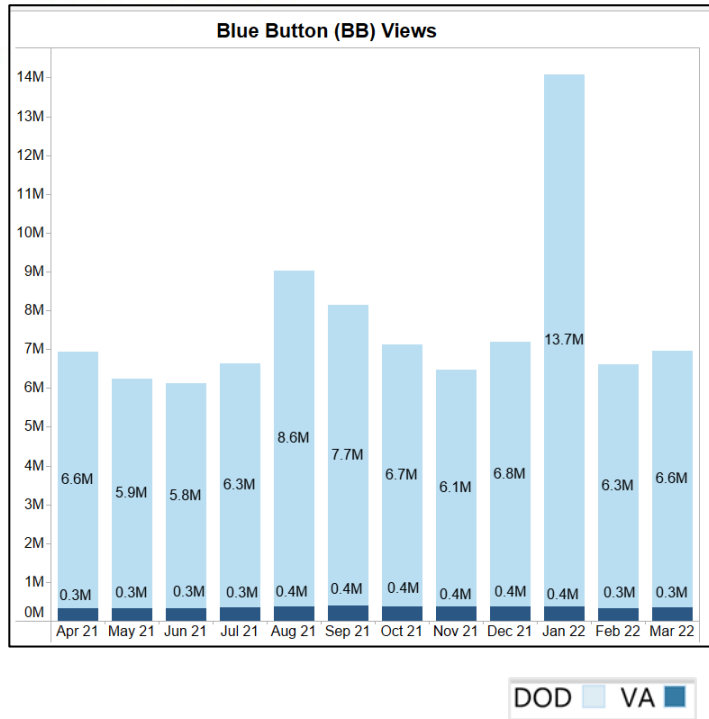


### Metric C.1: Blue Button Downloads

#### 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 increased by 8.67 percent between the first and second quarters to 771,560.	The increase in DOD Blue Button usage was driven by the second strand of Covid, back to work/back to school testing and the increase in proof of vaccination requests.
VA	Change	Impact Factors
▼	The total quarterly number of Blue Button downloads decreased by 0.22 percent between the first and second quarters to 1,715,386.	There are no factors of note.



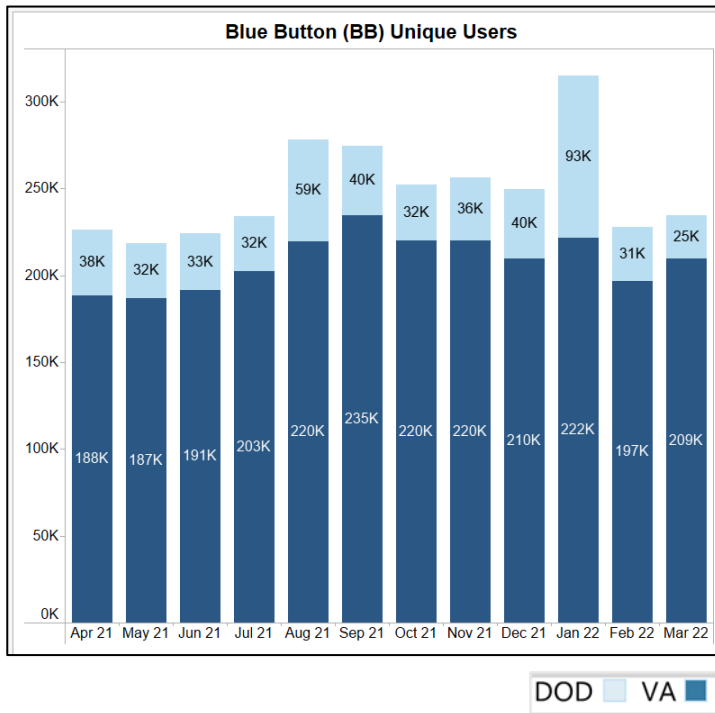
## Metric C.2: Blue Button Views

### Definition

Average number of views generated by end users per month

DOD	Change	Impact Factors
▲	The average quarterly number of Blue Button views increased by 35.01 percent between the first and second quarters to 8,857,707.	The increase in DOD Blue Button usage was driven by the second strand of Covid, back to work/back to school testing and the increase in proof of vaccination requests.
VA	Change	Impact Factors
▼	The average quarterly number of Blue Button views decreased by 5.01% percent between the first and second quarters to 350,820.	There are no factors of note.





<b>Metric C.3: Monthly Unique Blue Button Users</b>		
<b>Definition</b>		
Number of unique Blue Button users within a month.		
<b>DoD</b>	<b>Change</b>	<b>Impact Factors</b>
▲	The average monthly number of Blue Button unique users increased by 37.54 percent between the first and second quarters to 49,834.	The increase in DOD Blue Button usage was driven by the second strand of Covid, back to work/back to school testing and the increase in proof of vaccination requests.
<b>VA</b>	<b>Change</b>	<b>Impact Factors</b>
▼	The average monthly number of Blue Button unique users decreased by 3.35 percent between the first and second quarters to 209,319.	There are no factors of note.