FEDERAL ELECTRONIC HEALTH RECORD MODERNIZATION

FEHRM

Interoperability Progress Quarterly Report

FIRST QUARTER, FISCAL YEAR 2021

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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) program 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 Program Office:** During the first quarter of FY2021 (Q1 FY2021), the FEHRM focused on operationalization and convergence in its mission to provide a single, common federal electronic health record (EHR). This operationalization and convergence strategy unified efforts and delivered the common capabilities that add value to deployments including the EHR baseline; configuration and content management; software releases and upgrades; the Federal Enclave; cybersecurity; and virtual health. Further, during this reporting period, the FEHRM performed activities that advanced the creation of a common operating picture, identified joint opportunities and captured lessons learned.

- **Joint Configuration Management:** The Chief Medical Informatics Officer (CMIO) manages and optimizes the Joint Sustainment and Adoption Board (JSaAB). This joint governance body is responsible for approval of all joint EHR content and configuration changes. The JSaAB directly informs the Joint Change Control Board and is essential to operating the single, common federal EHR, providing DOD and VA insight into all configuration decisions impacting the production baseline. The first meeting of the JSaAB was held April 1, 2020, and the charter was signed July 17, 2020.

  As of Q1 FY2021, the JSaAB approved 291 weekly items and 30 daily go-live items that surfaced during VA's first go-live at Mann-Grandstaff VA Medical Center, DOD Wave NELLIS and DOD Wave PENDELTON. Further, the FEHRM CMIO established, finalized and rehearsed an e-JSaAB process for urgent and emergent issue resolution during off-hours to simulate real-world scenarios. In this effort, the team collected lessons learned and improved processes for EHR deployment.

  Additionally, the CMIO manages the Functional Decision Group (FDG). The FDG is a body of senior clinical and business leaders of the VA's Office of Electronic Health Record

Modernization (OEHRM), Veterans Health Administration (VHA) and the Defense Health Agency (DHA) Health Informatics communities. The FDG reviews, analyzes and decides on critical joint issues that apply to a single, common federal EHR. In Q1 FY2021, the FDG formally requested that the program management office technical communities address the need for allergy and medication checks to cross between both Departments' legacy systems and the federal EHR system.

During the reporting period, the CMIO, in collaboration with DOD and VA patient and clinician satisfaction subject matter experts (SMEs), began work to establish common instruments and methodologies to survey and measure clinical use and satisfaction with the federal EHR. This collaborative effort was enacted to assess satisfaction across DOD and VA, save government resources and reduce overall costs.

- **Joint Record Release of Information (ROI):** In Q1 FY2021, the FEHRM CMIO team supported the Health Information Business Line (HIBL)/Health Information Policy Work Group (HIPWG) on their delegated task to establish a policy that will govern the release of a complete medical record at the request of a patient. Support included drafting an ROI Integrated Product Team (IPT) Charter, developing a ROI point of contact list and creating a website for sharing documentation. Engaged stakeholders include VHA, VA Health Information Management, DOD Patient Administration Division, DOD Office of General Counsel and Cerner. In order to resolve core policy concerns, stakeholders are actively discussing the legal boundaries of current statute and policy. As this project moves into the execution phase, policy review and updates to the joint medical record are expected by the end of the second quarter of FY2021 (Q2 FY2021).

- **Joint Enclave Data Management:** During the Q1 FY2021 reporting period, there were several ongoing projects to address joint data management. The FEHRM CMIO team stood up several joint DOD/VA groups with different focus areas including codesets, terminology and data governance. The Codeset group has stood up a joint issue resolution tracker and reviewed several critical codesets.

  The Terminology group successfully drafted a charter that is now in coordination with anticipated adoption during Q2 FY2021. This group is now engaging with the vendor to jointly review and manage critical terminologies such as medications, labs and document types.

  Lastly, during the quarter, the FERHM launched a project to apply the emerging Joint Executive Committee (JEC) data management strategy to a practical operational plan for the Joint Enclave. In partnership with joint stakeholders, the group has developed a framework for a plan to define data management activities under a unified understanding of responsibilities across DOD, VA and the FEHRM. Planning is underway and anticipated for comment/release in Q2 FY2021.

- **Joint Enclave Management:** The FEHRM's Technical Director hosted several Environment Management Operations Center (EMOC) activities in partnership with DOD and VA program offices and their prime vendors. Sessions included Go-Live Lessons Learned, VA OEHRM and DOD Healthcare Management System Modernization (DHMSM) Joint Cybersecurity Team (ODJCT) Joint Cyber Guide, Identity/Demographic Management Updates for Improved Patient Customer Service and Shared Architecture Between OEHRM and DHMSM. In addition, EMOC partners facilitated a deployment walkthrough session to prepare all parties for the intense schedule of go-live activities through FY2021.

  As a result of the ongoing functional-technical collaboration, the EMOC also continued to host technical and functional hybrid discussions on joint sharing sites. Technical and functional SMEs were able to collaborate and request further examination of preliminary courses of action and associated critical milestones. This effort serves as a driving force for the FEHRM and Departments to get to an integrated plan for the single, common federal EHR and work through technical issues as they deliver capabilities. The Enterprise Operations Center (EOC) continued to support cross-organizational collaboration and executive level reporting on the Federal Enclave and ecosystem during federal go-live events.

- **Joint/Sharing Sites Implementation:** During Q1 FY2021, 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 collaborated with its DHA Health Informatics (DHA HI) and VHA Office of Health Informatics (VHA OHI) colleagues to assess the degree of clinical shared services at 83 DOD and 56 VA facilities. The FEHRM, DHA HI and VHA OHI reviewed the completed data collection workbooks and categorized sharing sites according to an agreed-upon criteria, with the most integrated sharing sites (12 VA facilities and 14 DOD facilities, not including the James A. Lovell Federal Health Care Center [FHCC]) requiring further analysis. The FEHRM, DHA HI and VHA OHI are currently engaging sites in discovery assessments to gain a more accurate understanding of the nature of current sharing arrangements and patient encounter touchpoints, and to use this information to assess the risks and benefits of synchronous verses asynchronous deployments at these sharing sites.

  The FEHRM also generated a Site Engagement Report in follow-up to the FEHRM-organized and led multi-stakeholder engagement at the FHCC. The Site Engagement Report summarizes clinical and technical insights gained during the site engagement and recommends a subsequent end-to-end assessment at the FHCC to gather critical information in preparation for a joint deployment.

  Further, the FEHRM actively worked with its interagency partners to mitigate risks associated with the asynchronous DOD and VA EHR deployments affecting joint sharing sites in Nevada and Alaska. The FEHRM lead efforts to identify optimum workflows, roles

and training resources for joint users; supported the successful test of VA users' ability to access the federal EHR using a VA computer on a VA network with a Personal Identity Verification card; and worked with both program management offices to identify and include VA users in the local DOD User Role Assignment list for training and provisioning.

Finally, in collaboration with DHMSM, the FEHRM supported the execution of a Technical Direction Letter to accelerate deployment, technical and functional planning for the implementation of the federal EHR at joint sharing sites.

- **Deployment:** Throughout the reporting period, the FEHRM continued to drive federal capabilities to enhance health care by leading value-added activities for DOD and VA EHR deployments. These activities included managing common capabilities such as the EHR baseline, the Federal Enclave, monitoring activities, software releases and upgrades and cybersecurity.

  Despite the significant operational impacts of COVID-19, the FEHRM delivered value and added capabilities integral to federal EHR modernization. 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 FY2021, the FEHRM supported the VA's go-live at Mann-Grandstaff VA Medical Center (October 24, 2020) and the DOD's go-live of Wave PENDLETON (October 31, 2021).

Joint Health Information Exchange (HIE)

- **Joint HIE Enhancements:** The FEHRM continued to support enhancements to the joint HIE, including enhancing patient matching double checks to accurately match patient data exchanged and the option to bypass the joint HIE cache to send new patient discoveries and documents queried and received to all external partners. The FEHRM also supported planning for the migration of the Social Security Administration-VA legacy electronic health exchange (eHx) connection to the joint HIE and related enhancements scheduled to be in production by the end of Q2 FY2021.

- **Joint HIE/Joint Longitudinal Viewer (JLV) Collaboration:** The FEHRM continued to facilitate the joint HIE/JLV Bi-Weekly Collaboration Meeting, enabling DOD and VA senior leaders to review joint HIE and JLV progress, discuss risks and identify future opportunities. Working collaboratively through this forum, the FEHRM and the Departments have been able to prioritize and plan for joint HIE improvements; elevate issues and determine corrective actions; and address joint HIE technical issues.

- **CommonWell Health Alliance:** In October 2020, the FEHRM successfully connected the joint HIE with the CommonWell Health Alliance, adding a nationwide network of 15,000-

plus hospitals and clinics to the 46,000 community partners already part of the joint HIE. The CommonWell connection allows providers in DOD, VA and USCG to access information on their patients' prescriptions, allergies, illnesses, lab and radiology results, immunizations, past medical procedures and medical notes to make the best care decisions. The joint HIE and CommonWell connection is part of the FEHRM's overarching effort to deliver capabilities that enable the DOD, VA and USCG to deploy a single, common federal EHR.

Interoperability Modernization Strategy

- **Interoperability Modernization Strategy (Phase 1):** The DOD and VA Interoperability Modernization Strategy was signed by the DOD and VA Deputy Secretaries and delivered to Congress in October 2020. The document was shared throughout DOD and VA, as well as with federal partners such as the Office of the National Coordinator of Health Information Technology (ONC). It also received coverage in health IT online publications.

- **Interoperability Modernization Strategy Supporting Plan (Phase 2):** The Interoperability Modernization IPT continued to meet throughout October 2020 to determine the most significant existing DOD/VA and departmental initiatives that aligned to the strategy goals and objectives. The Interoperability Modernization Advisory Group reviewed the IPT's identified initiatives and provided feedback. The IPT met again in December 2020 to review the Advisory Group feedback and to outline the structure of the Supporting Plan document. The FEHRM then drafted the document based on the IPT's guidance.

- **Interoperability Modernization Strategy Performance Measures (Phase 3):** The FEHRM developed the overall approach and plan for phase 3, which will develop performance measures that enable tracking of progress toward the objectives identified in the Interoperability Modernization Strategy.

Interoperability Standards

- **Dental Data Exchange:** The FEHRM convened representatives from DOD, VA, American Dental Association (ADA) and the Health Level Seven International (HL7) community to develop standards for Dental Data Exchange based on HL7's Clinical Document Architecture (CDA) and Fast Healthcare Interoperability Resources (FHIR). Following the HL7 September 2020 ballot cycle, the FEHRM led ballot reconciliation and continued to resolve outstanding comments received from the HL7 community. This work should result in publication of two Dental Data Exchange standards for sharing computable dental findings across DOD, VA and private sector providers in the first quarter of calendar year 2021. Publication of these standards will enhance the patient record and facilitate readiness assessments. The FEHRM is currently coordinating with the U.S. Air

Force Chief Medical Information Officer and dental leads across the Services to plan pilot implementations.

- **ONC Engagements:** During Q1 FY2021, the FEHRM collaborated with ONC stakeholders to further the progress of interoperability standards. The FEHRM participated in numerous ONC meetings, webinars and public comment periods to inform their work in support of the 21st Century Cures Act Trusted Exchange Framework and Common Agreement provisions outlined in Section 4003 of the law.

  In addition, the FEHRM continued representation with Federal Health IT Advisory Committee (HITAC) meetings; the Federal Health IT Coordinating Council (FHIT CC); U.S. Core Data for Interoperability (USCDI) and FHIR Workgroups; the Trusted Exchange Framework and Common Agreement (TEFCA) Federal Workgroup; Federal Patient Identity and Patient Matching efforts; and HITAC Annual Report Workgroup meetings

  Additional key Q1 FY2021 engagements with ONC included the following activities:
  - Coordinated more than 65 comments from the Departments on ONC's Interoperability Standards Advisory (ISA) and Standards Version Advancement Process (SVAP) and submitted to ONC on November 9, 2020.
  - Hosted FEHRM Interoperability and ONC Coordination quarterly meetings to exchange FEHRM and ONC current engagements and to discuss any potential collaboration opportunities. For example:
    - Collaborate with Federal Health IT Coordinating Council to convene federal health IT purchasers, developers and users (builds off the FEHRM's vision to coordinate across federal health care delivery systems)
    - Interest in Health IT Advisory Committee (HITAC) providing feedback on interoperability metrics being developed by the FEHRM
  - Hosted the FEHRM Industry Interoperability Roundtable on November 18, 2020 with panel discussions on the federal EHR and social determinants of health (SDOH).
  - Coordinated reviews of SDOH domains, including inadequate housing, housing instability and transportation instability, and provided more than 150 comments for consideration by the HL7 Gravity Project.
  - Participated in ONC webinars such as:
    - Interim Final Rule with Comment Period
    - Federal Health IT Strategic Plan 2020-2025
    - ONC sessions at American Medical Informatics Association (AMIA) 2020 Annual Symposium
    - Accelerating Application Programming Interfaces in Healthcare: A Year in Review and Momentum for 2021
    - Final Rule with Comment Period
    - SDOH

Looking ahead to Q2 FY2021, the FEHRM will participate as a federal member of the FHIT CC USCDI Task Force and in the new ONC initiative, Project US@, to develop and issue a unified, industry-wide specification for representing address in health care by the end of 2021. It will participate with ONC on social determinants of health, looking at state COVID-19 mitigation efforts and initiatives. The upcoming quarter will also see the FEHRM coordinate the review of ONC's draft Report to Congress on Patient Matching and Identity within the FEHRM and the Departments and also the ONC ISA Courtesy Federal Review of the pre-publication 2021 ISA Reference Edition. It will also coordinate the review and comment collection of the draft HITAC Annual Report for FY2020 (as required by the 21st Century Cures Act) and the DRAFT USCDI V2 release (January–April 2021) and participate in ONC's Annual Meeting (March 29–30, 2021).

Conclusion

The Departments remain focused on enhancing and measuring health data interoperability with the single, common federal EHR as well as with those of their private sector partners who treat DOD and VA beneficiaries. Enabling health information exchange in the DOD, VA 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 dependents. To demonstrate the effect on patients and providers as DOD and VA 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 efforts.

Appendix A: Health Data Interoperability Metrics Details

HDI Metrics Details: Throughout Q1 FY2021, the FEHRM, DOD and VA continued to collaborate to monitor baseline HDI metrics and the progress toward modernization and enhancement of HDI by both Departments. Each section shows a different interoperability dimension, as derived from the HDI Measurement Framework: (A) Department Integration, (B) Community Partnerships and (C) Patient Engagement. Figure 1 represents a snapshot of the Q1 FY2021 HDI Metrics Dashboard. Detailed explanations of the metric trends follow Figure 1. A small 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 FY2021 HDI Metrics Dashboard
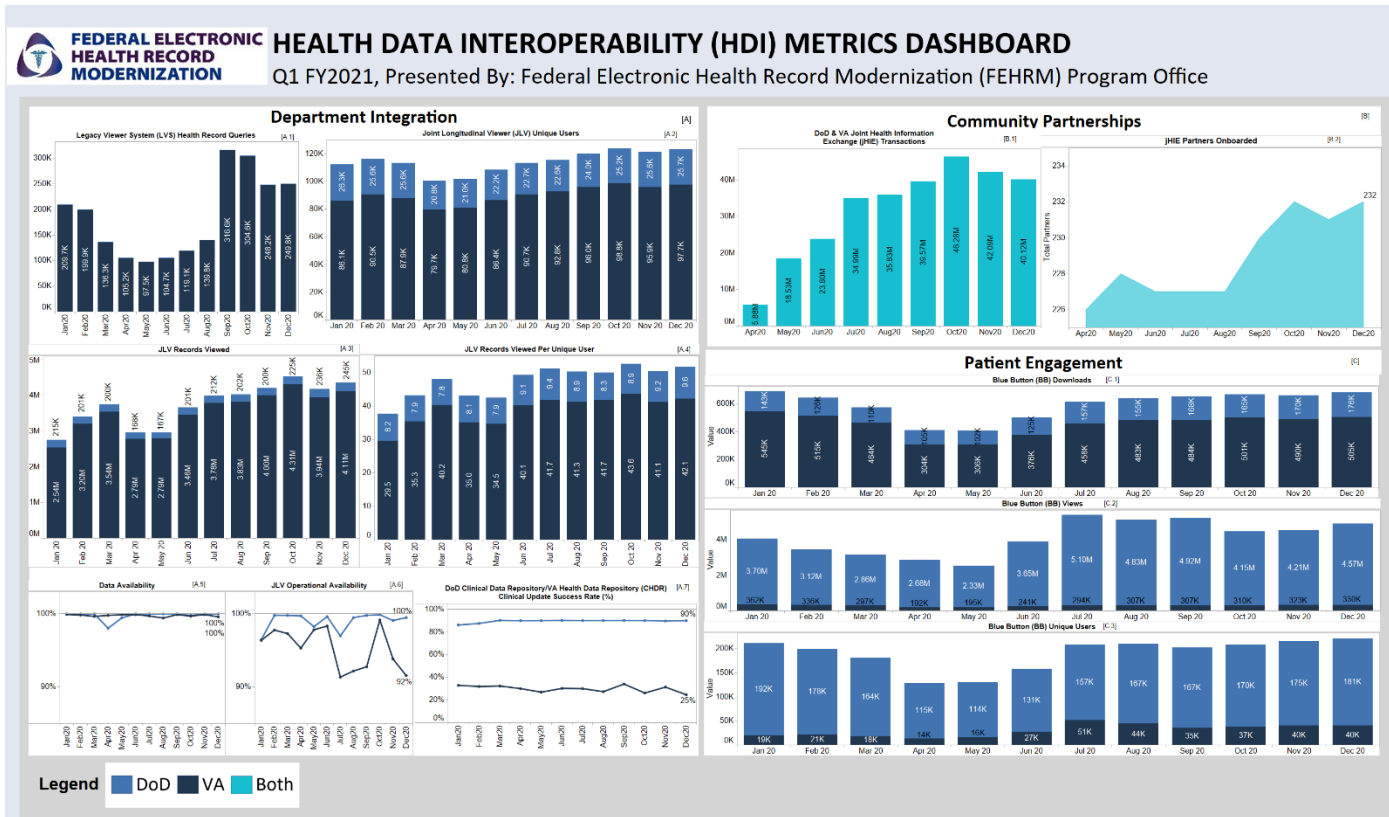
Q1 Highlights: As seen in Table 1, between Q4 FY2020 and Q1 2021, quarter over quarter Legacy Viewer System (VA) and Blue Button (DOD) usage increased substantially.

Table 1 – Quarter Highlights

Metrics with a Notable Change in Q1 FY2021	Quarterly Delta	Supporting Information
VA Legacy Viewer System (LVS) Health Record Queries [Metric A.1]	39.44% increase from a total of 575,574 in Q4 FY2020	The increase in the number of VA LVS Health Record Queries is attributed to added functionality to the VistA Integration Adapter (VIA) application that increased VIA queries through Station 200 on August 31, 2020. This increase of VIA activity in Production increased LVS queries from approximately 6k – 7k a day to 13k – 15k a day.
DOD Blue Button Views [Metric C.2]	41.46% increase from a total of 14,847,703 in Q4 FY2020	The increase in the monthly average number of views generated by end users is attributed to COVID-19 Lab Test availability, the increase in the amount of telehealth visits and increased inability to access test results in person.

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 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

Department of Veterans Affairs (VA)

- Veterans Health Information System Technology Architecture (VistA) / Computerized Patient Record System (CPRS)
- VistA Imaging
- Enhanced Cerner Millennium data
- OEHRM

JLV

Department of Defense (DoD)

- Armed Forces Health Longitudinal Technology Application (AHLTA)
- Composite Health Care System (CHCS)
- Essentris ®
- Health Artifact and Image Management Solution (HAIMS)
- Theater Systems
- MHS GENESIS (Cerner)

Private Sector
Health Information Exchange (HIE)

2. **Joint Health Information Exchange (HIE).** The joint HIE is a secure network that shares Veteran and Military Health System (MHS) 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. **MHS GENESIS.** Beginning in 2017, DOD Initial Operating Capability (IOC) sites in the Pacific Northwest went live with MHS GENESIS (DOD's current name for the federal EHR). MHS GENESIS is designed for patients and health care professionals is designed to transfer a beneficiary's medical information within MHS and with VA. Subsequent deployments of MHS GENESIS in Waves TRAVIS (Q4 FY2019), NELLIS (Q4 FY2020), and PENDLETON (Q1 FY2021) took place at military medical treatment facilities in California, Idaho and Nevada. End-user metrics regarding MHS GENESIS will be reported on jointly with VA's Modern EHR beginning with the FEHRM's Q2 FY2021 Interoperability Progress Quarterly Report.

6. **VA Modern EHR.** Beginning in October 2017, the VA Modern EHR (VA's current name for the federal EHR) went live at the first VA IOC sites in the Pacific Northwest and Nevada. VA's Modern EHR will replace its current EHR systems with the federal EHR. VA's new EHR will provide clinicians with quick and efficient access to the complete picture of Veteran health, improving VA's delivery of health care to our nation's Veterans.

Data Sharing Statistics and Updates: The FEHRM, DOD and VA continue to expand HDI by improving upon the more than 4.4 million patient records currently shared monthly between the two Departments, as defined by the monthly total number of JLV Records viewed by the Departments reported as of December 31, 2020.

Category A: Department Integration

Value Statement: The FEHRM tracks utilization of the legacy EHRs and the federal EHR, which enables departmental leadership and Congress to assess the reliability of legacy systems and evaluate the Departments' progress in transitioning from the less interoperable legacy systems (e.g., Armed Forces Health Longitudinal Technology Application [AHLTA] and Veterans Health Information Systems and Technology Architecture [VistA]) to the federal EHR.

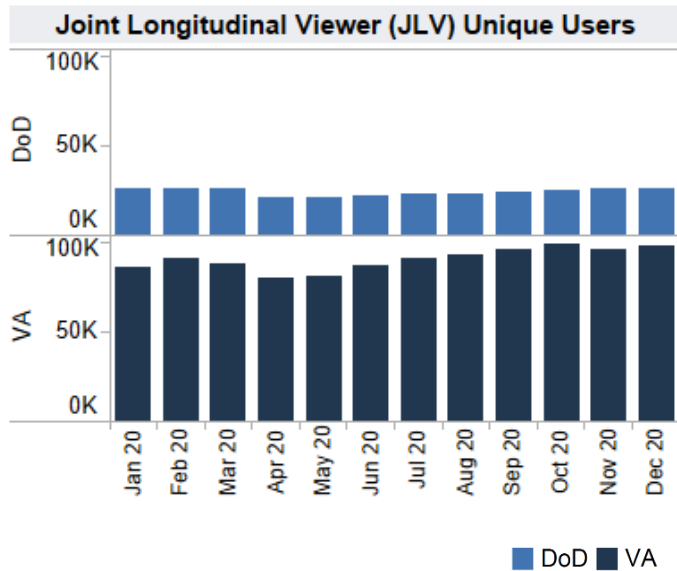Legacy Viewer System (LVS) Health Record Queries
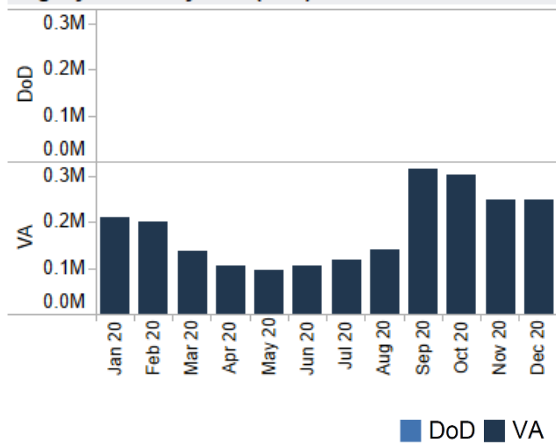
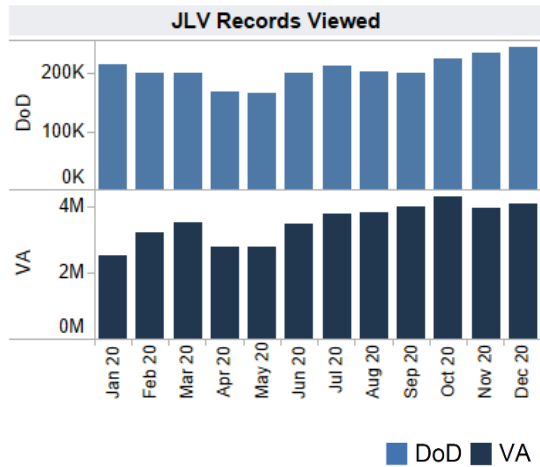### Metric A.1: Legacy Viewer System (LVS) Health Record Queries

Definition

Total number of health record queries made by DOD and VA to the Federal Health Information Exchange/Bidirectional Health Information Exchange Framework database using VistA Web and the Computerized Patient Record System Remote Data View in each month
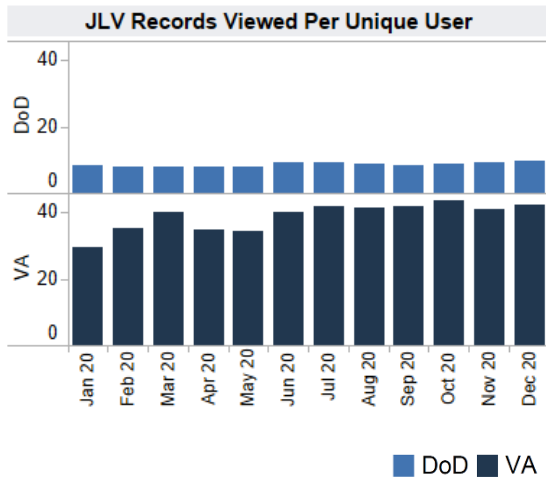
DOD	Change	Impact Factors
	DOD discontinued use of the LVS in April 2019, so there are no changes.	DOD implemented the Agile Core Services/Data Access Layer integration with Data Exchange Service in April 2019 and discontinued use of the LVS.

| VA	Change	Impact Factors
▲	The total number of health record queries increased by 39.44 percent between the fourth and first quarters to 802,556 queries.	The increase in the number of VA LVS Health Record Queries is attributed to added functionality to the VistA Integration Adapter (VIA) application that increased VIA queries through Station 200 on August 31, 2020. This increase of VIA activity in Production increased LVS queries from approximately 6k–7k a day to 13k–15k a day.

Joint Longitudinal Viewer (JLV) Unique Users

Legend: DoD, VA

Metric A.2: JLV Active Unique Users

Definition

Monthly total 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 10.25 percent between the fourth and first quarters to 25,483.	There are no factors of note.

VA	Change	Impact Factors
▲	The average monthly number of active JLV users increased by 4.59 percent between the fourth and first quarters to 97,456.	• There are no factors of note. • The change reflects computational adjustments made for prior quarter.

JLV Records Viewed

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 viewed increased by 14.97 percent between the fourth and first quarters to 706,532.	There are no factors of note.
VA	**Change**	**Impact Factors**
▲	The total quarterly number of JLV records viewed increased by 6.46 percent between the fourth and first quarters to 12,357,895.	• There are no factors of note. • The change reflects computational adjustments made for prior quarter.

JLV Records Viewed Per Unique User

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

Definition		
Monthly 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 active unique user increased by 4.14 percent between the fourth and first quarters to 9.24.	There are no factors of note.

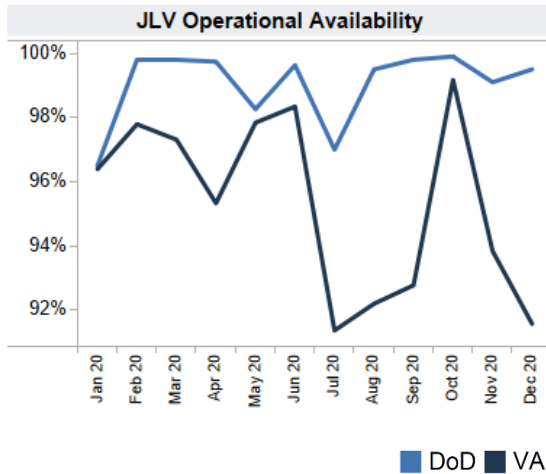| VA	Change	Impact Factors
▲	The average monthly number of JLV records viewed per active unique user increased by 1.75 percent between the fourth and first quarters to 42.25.	• There are no factors of note. • The change reflects computational adjustments made for prior quarter.
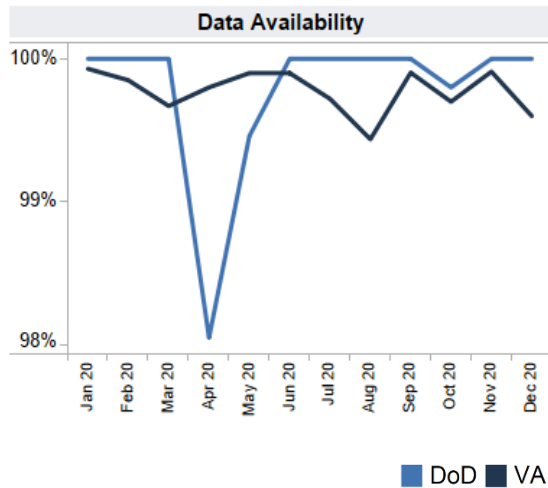
Data Availability

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 0.07 percent between the fourth and first quarters to 99.93 percent.	There are no factors of note.

| VA	Change	Impact Factors
▲	The average monthly data availability increased by 0.05 percent between the fourth and first quarters to 99.74% percent.	There are no factors of note.

JLV Operational Availability

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 0.73 percent between the fourth and first quarters to 99.5 percent.	There are no factors of note.
VA	**Change**	**Impact Factors**
▼	The average monthly operational availability decreased by 2.75 percent between the fourth and first quarters to 94.86 percent.	The decrease in the average operational availability of JLV was driven by outages in services that JLV uses to connect to VA and DOD data sources, which include: - the Veterans Health Information System and Technology Architecture (VISTA) Data Service (DS) (VDS) (VA Log in and retrieval of VA records) - Snareworks (DOD Log in) - Patient Discovery Web Service (PDWS) (Patient look up) - Master Veterans Index (MVI) (Retrieves VA patient ID) - jMeadows (Connects to MVI/PDWS/VDS) - Bidirectional Health Information Exchange Relay (BHIERelay) (retrieval of DOD records)

Metric A.7: CHDR Clinical Data Update Success Rate from DOD to VA and VA to DOD
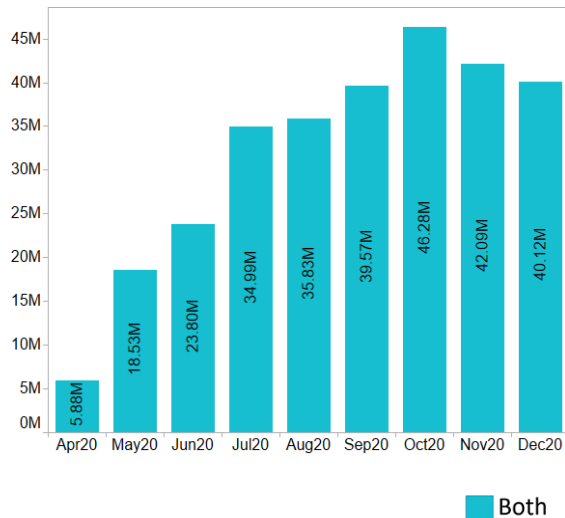
Definition
Percentage of CHDR clinical update messages with data (allergy or pharmacy) successfully processed (a successful process occurs when the sending agency receives a response from the receiving agency indicating successful receipt, translation and storage of clinical data.)

DOD	Change	Impact Factors
▲	The average monthly CHDR clinical data update success rate had an increase of 1.17 percent from 90.08 percent in quarter four to 91.25 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 3.09 percent from 30.49 percent in quarter four to 27.40 percent in quarter one.	• Analysis over the Q1 FY2021 revealed large backlogs in messages from DOD to VA causing anywhere from 1 to 6 day delays in VA receiving DOD messages as well as receiving responses to VA messages. • The DOD CHDR team are in the design stages of replacing the current interface component to mitigate these delays, however there is no estimated time of arrival for deployment to production at this time.

CHDR Clinical Data Update Success Rate
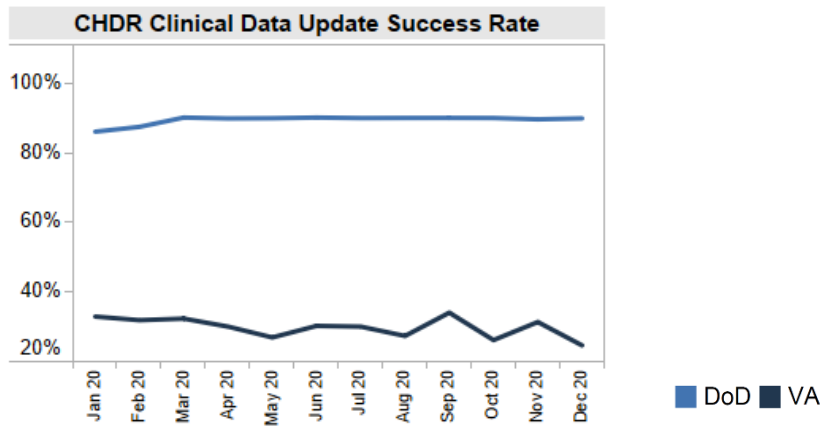
Category B: Community Partnerships

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.

Chart data (Both):
- Apr20: 5.88M
- May20: 18.53M
- Jun20: 23.80M
- Jul20: 34.99M
- Aug20: 35.83M
- Sep20: 39.57M
- Oct20: 46.28M
- Nov20: 42.09M
- Dec20: 40.12M

Metric B.1: Joint HIE Transactions

Definition
Monthly count of Consolidated Clinical Document Architecture, C32 or C62 (document architecture that facilitates interoperability of health data between EHR systems) documents exchanges between the Departments and private partners

| DOD/VA	Change	Impact Factors
▲	The total number of joint HIE transactions increased by 16.39 percent between the fourth and first quarters to 128,487,546.	DOD, VA and the FEHRM opened access to the joint HIE in mid-April 2020. Providers from the Departments and private sector treating their patients are now able to use the joint HIE to request access to health records of shared patients.

Metric B.2: Joint HIE Partners Onboarded

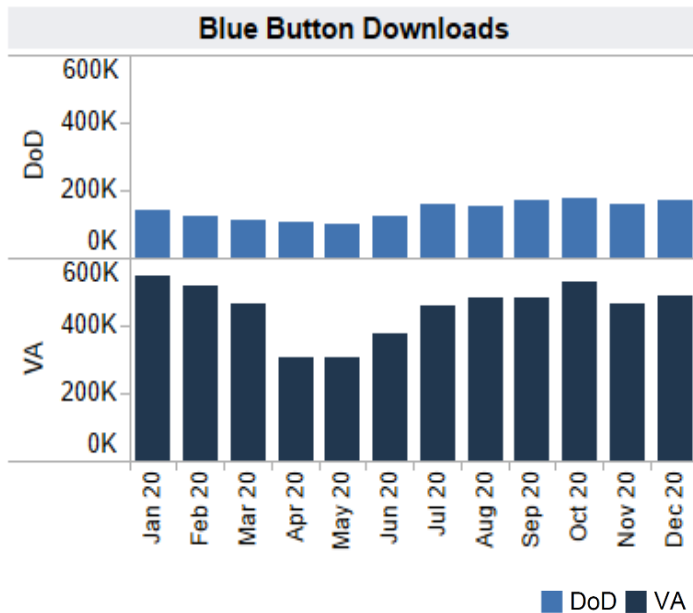| Definition		
Monthly and cumulative count of private sector providers who are partners in the joint HIE (a private sector provider is counted as one partner if the provider has one or more data sharing agreement(s) with DOD or VA)		
DOD/VA	**Change**	**Impact Factors**
▲	Two additional joint HIE partners were onboarded between the fourth and first quarters, bringing the total to 232.	There are no factors of note.
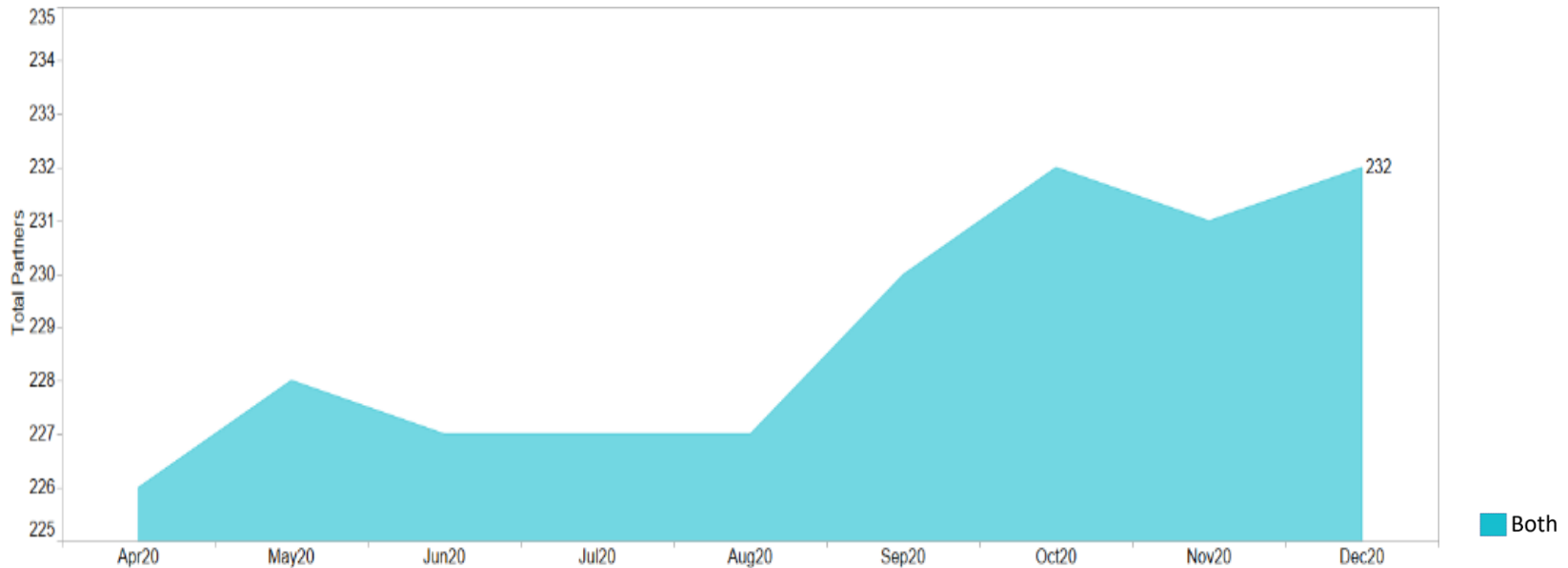
Category C: Patient Engagement

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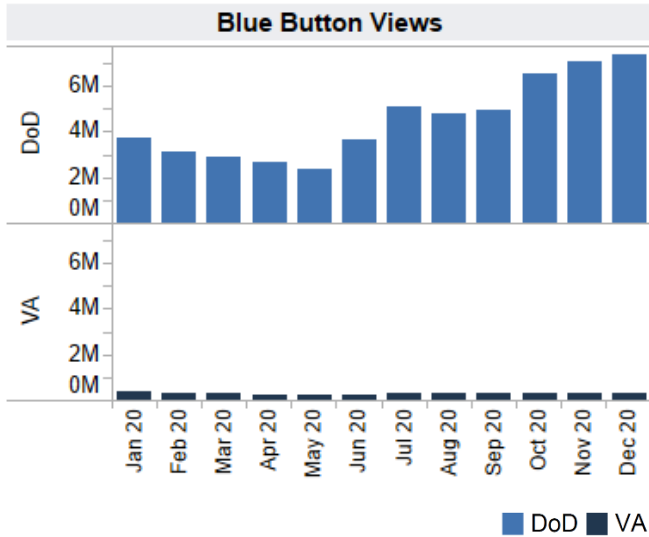

Blue Button Downloads

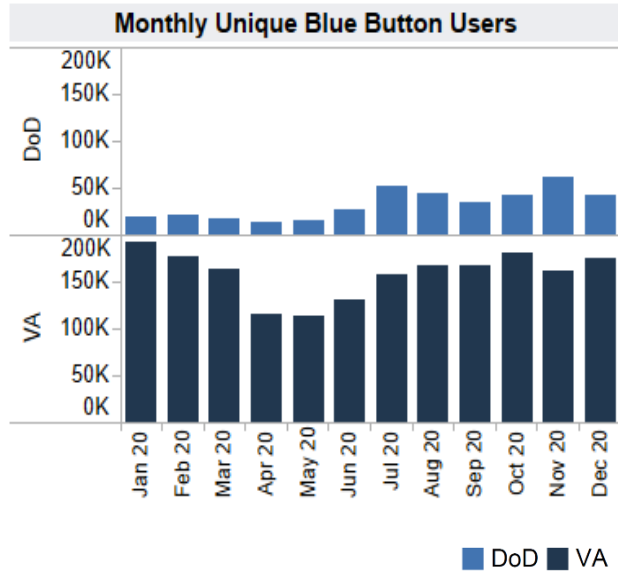### Metric C.1: Blue Button Downloads

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 5.37 percent between the fourth and first quarters to 506,049.	There are no factors of note.

VA	Change	Impact Factors
▲	The total quarterly number of Blue Button downloads increased by 4.09 percent between the fourth and first quarters to 1,483,339.	There are no factors of note.

Blue Button Views

Metric C.2: Blue Button Views		
Definition		
Total number of views generated by end users per month		
DOD	**Change**	**Impact Factors**
▲	The total quarterly number of Blue Button views increased by 41.46 percent between the fourth and first quarters to 21,003,973.	The increase in the monthly average number of views generated by end users is attributed to COVID-19 Lab Test availability and the increase in the amount of telehealth visits and increased inability to access test results in person.
VA	**Change**	**Impact Factors**
▲	The total quarterly number of Blue Button views increased by 2.56 percent between the fourth and first quarters to 930,914.	There are no factors of note.

Monthly Unique Blue Button Users

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 increased by 11.56 percent between the fourth and first quarters to 48,308.	There are no factors of note.

VA	Change	Impact Factors
▲	The average monthly number of Blue Button unique users increased by 5.16 percent between the fourth and first quarters to 172,241.	There are no factors of note.