| Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Defense Health Agency | | | | | | | | | | | Date: February 2019 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Appropriation/Budget Activity**<br>0130: *Defense Health Program I* BA 2: *RDT&E* | | | | | **R-1 Program Element (Number/Name)**<br>PE 0605023DHA I *Integrated Electronic Health Record (iEHR)* | | | | | | | |
| **COST ($ in Millions)** | **Prior Years** | **FY 2018** | **FY 2019** | **FY 2020 Base** | **FY 2020 OCO** | **FY 2020 Total** | **FY 2021** | **FY 2022** | **FY 2023** | **FY 2024** | **Cost To Complete** | **Total Cost** |
| Total Program Element | 48.426 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 444A: *Integrated Electronic Health Record Inc 1/ Defense Medical Information Exchange (DMIX)* | 41.148 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 444B: *Information Technology Development - DoD Healthcare Management System Modernization (DHMSM)* | 4.720 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| 449A: *Virtual Lifetime Electronic Record (VLER) HEALTH* | 2.558 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |

**Program MDAP/MAIS Code:**
**Project MDAP/MAIS Code(s):** 465

**A. Mission Description and Budget Item Justification**

In March 2008, the MHS embarked upon Electronic Health Record (EHR) modernization planning, establishing the initial Electronic Health Records Way Ahead (EHRWA).

In March 2011, the Program was expanded to include the VA in a joint initiative to implement a new, integrated electronic health record for both Departments, called the Integrated Electronic Health Record (iEHR) program.

Secretary Hagel's Memorandum titled "Integrated Electronic Health Records," dated May 2013, provided additional direction to the program:

• DoD shall continue near-term coordinated efforts with VA to develop data federation, presentation, and interoperability. This near-term goal shall be pursued as a first priority separately from the longer-term goal of health record information technology (IT) modernization.

• DoD shall pursue a full and open competition for a core set of capabilities for EHR modernization.

To fulfill Secretary Hagel's directive, parallel programs have been defined, splitting the original iEHR program into two distinct areas. In the Under Secretary of Defense for Acquisition, Technology and Logistics (USD (AT&L)) Acquisition Decision Memoranda (ADM), dated June 21, 2013 and January 2, 2014, the former joint DoD and VA Integrated Electronic Health Record (iEHR) program was restructured to pursue two separate but related healthcare information technology efforts, the DoD Healthcare Management System Modernization (DHMSM) program and a newly defined iEHR focused on providing seamless integrated sharing of electronic health

| Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Defense Health Agency | | Date: February 2019 |
|---|---|---|
| **Appropriation/Budget Activity**<br>0130: *Defense Health Program I BA 2: RDT&E* | **R-1 Program Element (Number/Name)**<br>PE 0605023DHA *I Integrated Electronic Health Record (iEHR)* | |

data between the DoD and VA to be called Defense Medical Information Exchange (DMIX). The remaining iEHR Increment 1 (iEHR Inc 1) was significantly de-scoped to only the Medical Single Sign-on/Context management (MSSO/CM) implemented at James A. Lovell Federal Health Care Center (JAL FHCC).

iEHR RDT&E is reported under the program element (PE) 0605013 through FY 2013 inclusive, but iEHR, VLER Health and DHMSM will be reported under new program element 0605023 for FY 2014.

In FY 2015, PE 0605023 will report only iEHR and VLER Health since DHMSM will have its own PE starting in FY 2015.

In FY 2016 and out, only iEHR Increment 1 will be reported in PE 0605023. DHMSM will continue to be only initiative reported in PE 0605026. However, new PE 06050039 is established for DMIX for FY 2016 and out. DMIX will incorporate the previous VLER Health and JEHRI initiatives.

| B. Program Change Summary ($ in Millions) | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
|---|---|---|---|---|---|
| Previous President's Budget | 0.000 | 0.000 | 0.000 | - | 0.000 |
| Current President's Budget | 0.000 | 0.000 | 0.000 | - | 0.000 |
| Total Adjustments | 0.000 | 0.000 | 0.000 | - | 0.000 |
| • Congressional General Reductions | 0.000 | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | - | - | | | |

| **Exhibit R-2A**, **RDT&E Project Justification:** PB 2020 Defense Health Agency | | | **Date:** February 2019 |
|---|---|---|---|

| Appropriation/Budget Activity<br>0130 *I* 2 | R-1 Program Element (Number/Name)<br>PE 0605023DHA *I Integrated Electronic Health Record (iEHR)* | Project (Number/Name)<br>444A *I Integrated Electronic Health Record Inc 1/ Defense Medical Information Exchange (DMIX)* |
|---|---|---|

| COST ($ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 444A: *Integrated Electronic Health Record Inc 1/ Defense Medical Information Exchange (DMIX)* | 41.148 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |

| **Project MDAP/MAIS Code:** 465 |
|---|

**A. Mission Description and Budget Item Justification**

In March 2008, the MHS embarked upon Electronic Health Record (EHR) modernization planning, establishing the initial Electronic Health Records Way Ahead (EHRWA).

In March 2011, the Program was expanded to include the VA in a joint initiative to implement a new, integrated electronic health record for both Departments, called the Integrated Electronic Health Record (iEHR) program.

Secretary Hagel's Memorandum titled "Integrated Electronic Health Records," dated May 2013, provided additional direction to the program:

• DoD shall continue near-term coordinated efforts with VA to develop data federation, presentation, and interoperability. This near-term goal shall be pursued as a first priority separately from the longer-term goal of health record information technology (IT) modernization.

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To fulfill Secretary Hagel's directive, parallel programs have been defined, splitting the original iEHR program into two distinct areas. In the Under Secretary of Defense for Acquisition, Technology and Logistics (USD (AT&L)) Acquisition Decision Memoranda (ADM), dated June 21, 2013 and January 2, 2014, the former joint DoD and VA Integrated Electronic Health Record (iEHR) program was restructured to pursue two separate but related healthcare information technology efforts, the DoD Healthcare Management System Modernization (DHMSM) program and a newly defined iEHR focused on providing seamless integrated sharing of electronic health data between the DoD and VA to be called Defense Medical Information Exchange (DMIX). The remaining iEHR Increment 1 (iEHR Inc 1) was significantly de-scoped to only the Medical Single Sign-on/Context management (MSSO/CM) implemented at James A. Lovell Federal Health Care Center (JAL FHCC).

| **B. Accomplishments/Planned Programs ($ in Millions)** | FY 2018 | FY 2019 | FY 2020 |
|---|---|---|---|
| *Title:* Integrated Electronic Health Record Inc 1/ Defense Medical Information Exchange (DMIX) (Tri-Service) | 0.000 | - | - |
| *Description:* The iEHR Increment 1 initiative achieved Full Deployment Decision November 2014 and is targeted to reach Full Deployment milestone by May 2016. Sustainment efforts for iEHR Increment 1 include the DoD sustainment of the James A | | | |

| **Exhibit R-2A**, **RDT&E Project Justification:** PB 2020 Defense Health Agency | | **Date:** February 2019 |
|---|---|---|
| **Appropriation/Budget Activity**<br>0130 *I* 2 | **R-1 Program Element (Number/Name)**<br>PE 0605023DHA *I Integrated Electronic Health Record (iEHR)* | **Project (Number/Name)**<br>444A *I Integrated Electronic Health Record Inc 1/ Defense Medical Information Exchange (DMIX)* |

| **B. Accomplishments/Planned Programs ($ in Millions)** | **FY 2018** | **FY 2019** | **FY 2020** |
|---|---|---|---|
| Lovell Federal Health Care Center (JAL FHCC) health care information technology that includes medical single sign-on/context management (MSSO/CM).  Program funding is also included to maintain DoD operations at the Interagency Program Office (IPO).<br><br>• The DoD/VA Interagency Program Office (IPO) was re-chartered on December 5, 2013.  The mission focus is addressing and coordinating the establishment of a clinical and technical standards profile and processes for data interoperability to create seamless integration of health data for DoD and VA.  The IPO will leverage national and international standards and open architecture design principles to preserve flexibility, and foster data interoperability with each other and appropriate commercial entities.  The IPO will enhance existing DoD and VA efforts with The Office of the National Coordinator (ONC) for Health Information Technology within the Health and Human Services (HHS) and other national and international standards organizations and coordinate and monitor the common components required for health data sharing and interoperability.  The primary deliverables include technical data interoperability architecture requirements, interface control documentation, terminology standards identification and data exchange guidance. | | | |
| **Accomplishments/Planned Programs Subtotals** | 0.000 | - | - |

**C. Other Program Funding Summary ($ in Millions)**

| Line Item | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • BA-1, PE 0807784DHA: *Information Technology Development -* | 16.303 | 16.529 | 17.986 | - | 17.986 | 16.912 | 17.253 | 17.598 | - | Continuing | Continuing |
| • BA-3, 0807784DHA: *Replacement/Modernization* | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | - | - | Continuing | Continuing |

**Remarks**

**D. Acquisition Strategy**
 N/A

**E. Performance Metrics**
 N/A

| **Exhibit R-2A**, **RDT&E Project Justification:** PB 2020 Defense Health Agency | | **Date:** February 2019 |
|---|---|---|
| **Appropriation/Budget Activity**<br>0130 *I* 2 | **R-1 Program Element (Number/Name)**<br>PE 0605023DHA *I Integrated Electronic Health Record (iEHR)* | **Project (Number/Name)**<br>444B *I Information Technology Development - DoD Healthcare Management System Modernization (DHMSM)* |

| COST ($ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 444B: *Information Technology Development - DoD Healthcare Management System Modernization (DHMSM)* | 4.720 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |

**A. Mission Description and Budget Item Justification**

DHMSM will acquire and support deployment, and implementation of an electronic health record (EHR) system that replaces the DoD legacy MHS inpatient and outpatient EHR systems. Overarching goal of the program is to enable healthcare teams to deliver high-quality, safe care and preventive services to patients through the use of easily accessible standards-based computerized patient records resulting in: improved accuracy of diagnoses and medication; improved impact on health outcomes; increased patient participation in the healthcare process; improved patient-centered care coordination; and increased practice efficiencies in all settings, including operational environments.

DHMSM replaces DoD legacy healthcare systems with a commercial solution in use in other medical systems that is open, rendered as a modular architecture, using standards-based/non-proprietary interfaces. DHMSM will support the Department's goals of net centricity by providing a framework for full human and technical connectivity and interoperability that allows DoD users and mission partners to share the information they need, when they need it, in a form they can understand and act on with confidence, and protects information from those who should not have it. Once fielded, the EHR will support the following healthcare activities for DoD's 44,000 practitioners and 9.5 million beneficiaries.
1. Clinical workflow and provider clinical decision support;
2. Capture, maintain, use, protect, preserve and share health data and information;
3. Retrieval and presentation of health data and information that is meaningful for EHR users regardless of where the patient's records are physically maintained; and
4. Analysis and management of health information from multiple perspectives to include population health, military medical readiness, clinical quality, disease management, and medical research.

| **B. Accomplishments/Planned Programs ($ in Millions)** | **FY 2018** | **FY 2019** | **FY 2020** |
|---|---|---|---|
| *Title:* DoD Healthcare Management System Modernization (DHMSM) | 0.000 | - | - |
| *Description:* DHMSM will be executed to deliver uniform information management options across both garrison and theater environments.  DHMSM will focus on replacement of inpatient and outpatient systems, and will encompass deployment of the enterprise EHR to fixed facilities as well as expeditionary components. | | | |
| **Accomplishments/Planned Programs Subtotals** | 0.000 | - | - |

| **Exhibit R-2A**, **RDT&E Project Justification:** PB 2020 Defense Health Agency | | **Date:** February 2019 |
|---|---|---|
| **Appropriation/Budget Activity**<br>0130 *I* 2 | **R-1 Program Element (Number/Name)**<br>PE 0605023DHA *I Integrated Electronic Health Record (iEHR)* | **Project (Number/Name)**<br>444B *I Information Technology Development - DoD Healthcare Management System Modernization (DHMSM)* |

**C. Other Program Funding Summary ($ in Millions)**
 N/A
**Remarks**

**D. Acquisition Strategy**
 N/A

**E. Performance Metrics**
 N/A

| Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Health Agency | | | | | | | | | | Date: February 2019 | |
|---|---|---|---|---|---|---|---|---|---|---|---|

| Appropriation/Budget Activity 0130 I 2 | | | | R-1 Program Element (Number/Name) PE 0605023DHA I Integrated Electronic Health Record (iEHR) | | | | | | Project (Number/Name) 449A I Virtual Lifetime Electronic Record (VLER) HEALTH | |

| COST ($ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 449A: *Virtual Lifetime Electronic Record (VLER) HEALTH* | 2.558 | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |

## A. Mission Description and Budget Item Justification

The primary goal of the VLER Health initiative is to enable the secure sharing of health information (i.e., demographic and clinical data) between DoD and external Federal and private sector partners which meets Meaningful Use (MU) requirements to improve healthcare quality, safety, and efficiency. By electronically sharing health information using national standards, that information can support tracking key clinical conditions, communicating that information to better coordinate care, and engaging patients in their own care. The VLER Health initiative provides clinicians with the most up-to-date information, potentially reducing redundant diagnostic tests, medical errors, paperwork and handling, and overall healthcare costs. These benefits, in turn, align with the MHS quadruple aim by ensuring that the military force is medically ready to deploy; the military beneficiary population remains healthy through focused prevention; patient care is convenient, equitable, safe, and of the highest quality; and the total cost of healthcare is reduced through the reduction of waste and focus on quality

| B. Accomplishments/Planned Programs ($ in Millions) | FY 2018 | FY 2019 | FY 2020 |
|---|---|---|---|
| *Title:* Virtual Lifetime Electronic Record (VLER) HEALTH | 0.000 | - | - |
| *Description:* Pursue the primary goal of the VLER Health initiative is to enable the secure sharing of health information (i.e., demographic and clinical data) between DoD and external Federal and private sector partners which meets Meaningful Use (MU) requirements to improve healthcare quality, safety, and efficiency. | | | |
| **Accomplishments/Planned Programs Subtotals** | 0.000 | - | - |

## C. Other Program Funding Summary ($ in Millions)

| Line Item | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • BA-1, PE 0807784: *Integrated Electronic Health Record (iEHR)* | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | - | - | - | Continuing | Continuing |
| • BA-3, PE 0807784: *Replacement/ Modernization, Integrated Electronic Health Record* | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | - | - | - | Continuing | Continuing |

**Remarks**

## D. Acquisition Strategy

Evaluate and use the most appropriate business, technical, contract and support strategies and acquisition approach to minimize costs, reduce program risks, and remain within schedule while meeting program objectives. Strategy is revised as required as a result of periodic program reviews or major decisions.

| **Exhibit R-2A**, **RDT&E Project Justification:** PB 2020 Defense Health Agency | | **Date:** February 2019 |
|---|---|---|
| **Appropriation/Budget Activity**<br>0130 *I* 2 | **R-1 Program Element (Number/Name)**<br>PE 0605023DHA *I Integrated Electronic Health Record (iEHR)* | **Project (Number/Name)**<br>449A *I Virtual Lifetime Electronic Record (VLER) HEALTH* |

**E. Performance Metrics**

Each program establishes performance measurements which are usually included in the MHS IT Annual Performance Plan. Program cost, schedule and performance are measured periodically using a systematic approach.