



**DOD/VA INTERAGENCY PROGRAM OFFICE
1700 NORTH MOORE STREET
ROSSLYN, VA 22209**

The Honorable Barbara A. Mikulski
Chairwoman
Committee on Appropriations
United States Senate
Washington, DC 20510

Dear Madam Chairwoman:

Please find enclosed the Department of Defense/Department of Veterans Affairs (DoD/VA) Interagency Program Office (IPO) Annual Report to Congress 2012, as required by section 1635 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2008 and section 252 of the Duncan Hunter NDAA for FY 2009. The law stipulates that the report contain (1) a detailed description of DoD/VA IPO activities, including related expenditures; (2) an assessment of the progress made by DoD and VA toward achieving full implementation of Electronic Health Record (EHR) systems or capabilities that allow for full interoperability; (3) a description and analysis of the level of interoperability and security of technologies for sharing health care information among DoD, VA, and their transaction partners; and (4) a description and analysis of the problems DoD and VA are having with, and the progress being made toward, ensuring interoperable and secure health care information systems and EHRs.

Part 3 of the IPO Report to Congress for 2012 contains projections for Calendar Year 2013 (CY13) that were made at the end of CY12. These projections have been revised and will be reflected in the CY 2013 Report. We will provide Congress with the revised plans when they are finalized.

Thank you for your interest in the health and well-being of our Servicemembers, Veterans, and their beneficiaries.

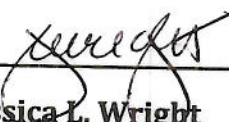
Sincerely,

Theresa Cullen, M.D., M.S.
Acting Deputy Director
DoD/VA Interagency Program Office

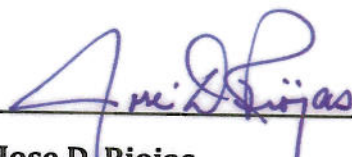
Enclosure:
As stated
cc:
The Honorable Richard C. Shelby
Vice Chairman




Department of Defense/Department of Veterans Affairs
Interagency Program Office
Annual Report to Congress
2012



Jessica L. Wright
Acting Under Secretary of Defense
(Personnel & Readiness)
Department of Defense



Jose D. Riojas
Chief of Staff
Department of Veterans Affairs



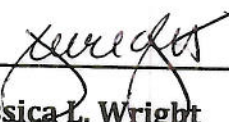
Barclay P. Butler, Ph.D
Director
DoD/VA Interagency Program Office

Required by
Section 1635 of the National Defense Authorization Acts (NDAA) for Fiscal Years (FY) 2008 and 2009

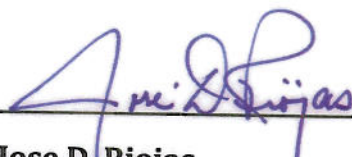
Preparation of this report cost the Department of Defense a total of approximately \$16,000
during Fiscal Years 2012-13.




Department of Defense/Department of Veterans Affairs
Interagency Program Office
Annual Report to Congress
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Jessica L. Wright
Acting Under Secretary of Defense
(Personnel & Readiness)
Department of Defense



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STATUTORY BASIS

The law that established the Interagency Program Office (IPO) of the Departments of Defense (DoD) and Veterans Affairs (VA), hereafter referred to as “the Departments”, section 1635 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2008, includes a requirement for the Director of the IPO to submit an annual report to the Secretaries of DoD and VA, and to the appropriate Committees of Congress. The law, as subsequently amended by section 252 of the Duncan Hunter NDAA for FY 2009, specifies what is to be included in the report as follows:

- a. A detailed description of the Departments IPO activities, including related expenditures
- b. An assessment of the progress made by the Departments toward achieving full implementation of Electronic Health Record (EHR) systems or capabilities that allow for full interoperability
- c. A description and analysis of the level of interoperability and security of technologies for sharing health care information among the Departments and their transaction partners
- d. A description and analysis of the problems the Departments are having with, and the progress being made toward, ensuring interoperable and secure health care information systems and EHRs.

The timeframe for the report as stated in the statute is the preceding calendar year, however both Departments maintain reporting precedents of fiscal years. In order to satisfy both the requirement of the statute and the reporting structure of the Departments, this report details those activities completed during FY 2012 and highlights activities scheduled for FY 2013.

EXECUTIVE SUMMARY

The IPO is leading the acquisition of a single integrated Electronic Health Record (iEHR) for all military members, veterans, and their beneficiaries. The iEHR will improve the quality of health care, improve provider and patient experiences, reduce costs, achieve interoperability among the Departments, and the private sector, and increase quality of care for every dollar expended.

During FY 2012 the three IPO missions continued to be iEHR, Virtual Lifetime Electronic Record (VLER) Health, and providing leadership, management and oversight for related activities. The principle oversight mission for the year was information technology (IT) for the James A. Lovell Federal Health Care Center (JAL FHCC) five-year demonstration project.

FY 2012 was a growth and maturation year for the IPO. Following the re-chartering of the organization in October 2011, the IPO brought on senior leadership, grew the Departments' civilian work force, established support contracts for the IPO, and instituted and enhanced IPO processes. The IPO developed an Integrated Acquisition Framework, merging the Departments acquisition processes, and established an acquisition schedule describing the functional and infrastructure capabilities for Increments 1 through 6 for achieving the iEHR solution. Increments 1 and 2 comprise the "iEHR Platform" that will support the end-to-end IT processes for the iEHR. The iEHR Platform constitutes the initial operational capability (IOC) for the iEHR and includes the necessary rebuilding of the existing EHR infrastructure. Increments 1 and 2 establish three clinical capabilities, provide risk mitigation, link new components with legacy systems, apply Agile acquisition processes, and complete critical design for the entire iEHR. The Critical Design for Increments 1 and 2 are still in progress. The Critical Design review for the early implementation of Service Oriented Architecture (SOA) Suite ESB (part of Increment 2) has been completed. The Critical Design Review for Increment 1 is planned for 3QFY13. The Initial Design Review for Increment 2 is complete and a Critical Design Review (formally called a Design Review of Record) will resume planning in April 2013 and will likely occur in advance of the Defense Acquisition Board Milestone B decision, scheduled for August 2013. IPO maintains extensive documentation on all activities related to Critical Design reviews.

While the iEHR evolved during FY 2012, the IPO VLER Health Program completed the VLER Health Exchange pilot at the fourth and final joint Departments location, and implemented VLER Health Exchange at seven additional VA locations.

Key accomplishments in the IPO oversight mission for IT at the JAL FHCC included deployment of the iEHR Presentation Layer, Laboratory Orders Portability (OP), the first increment of Consults OP, and solutions for Financial Reconciliation and Billing/Accounts Receivable.

During its first year as a re-chartered organization the IPO made significant progress by planning and implementing early increments of the iEHR, achieving a “Go” decision for further deploying VLER Health, and sustaining oversight for IT at the JAL FHCC. The IPO continues to build upon this success as another year begins.

INTRODUCTION

This IPO Annual Report to Congress is presented in three parts that provide information in response to the reporting requirements set forth in the Statutory Basis section of the report. The first part uses a question and answer format to address several declarations made in last year's IPO Annual Report to Congress. The second part describes the IPO's progress during FY 2012, providing an overview of staffing and facilities, a detailed explanation of ongoing program developments, the FY 2012 financial picture related to IPO activities, and the challenges for the coming year. The third part of the report presents a look ahead to IPO plans for FY 2013.

PART 1: FY 2011 Projections for FY 2012

The IPO Annual Report to Congress for 2011 (2011 Report) included assertions about program progress anticipated during 2012. These assertions are restated below in the form of questions, with answers given to describe FY 2012 IPO performance.

Q: The 2011 Report explained that the IPO organized teams to define various capabilities and processes for developing a single, integrated EHR (iEHR) for the Departments. How were the capabilities and processes defined in FY 2012?

A: As described in Part 2 of this report, IPO program, technical, and clinical informatics teams fully defined and scheduled joint DoD/VA capabilities and processes for iEHR during FY 2012. This is a dynamic, ongoing process.

Q: In the 2011 Report the IPO noted that it was continuing to build relationships with private health care providers for information exchange through VLER Health. What FY 2012 activity showed that this continued?

A: In FY 2012, IPO senior staff members interacted with local health exchange and provider partners in seven states to begin Health Information Exchange (HIE) activities, and in several more states and the territory of Guam to provide guidance in preparation for future VLER Health exchange sites. More about these relationships is in the VLER Health section of this report.

Q: With respect to another aspect of the VLER Health Program, the 2011 Report noted that the Departments had successfully completed phased development of data modules to support a July 2012 Go/No-Go decision on the national rollout of initial operating capability (IOC). How did this effort turn out?

A: In August 2012, the the Departments JEC approved a "Go" decision for the incremental rollout of VLER Health capabilities. Priorities for the incremental rollout are explained in Part 3 of this report.

Q: What FY 2012 IPO actions helped toward overcoming interagency coordination issues?

A: The next section in this report shows how the Departments came together in FY 2012 to improve interagency coordination by physically placing senior staff level iEHR program managers from each Department in the IPO, by standing up the Technical Division and the Clinical Information and Requirements Division (CIRD) in the IPO, and by exercising IPO governance and collaborating with the IPO Advisory Board.

Q: How did the IPO manage the sizable and complex task of modernizing the legacy health IT systems of the Departments?

A: FY 2012 is one year of a five-year modernization effort to acquire the iEHR. Activities in FY 2012 focused on building and maturing the IPO, designing the iEHR solution, exercising governance, reducing risk to the iEHR program, building iEHR technical infrastructure, and defining clinical and technical requirements. The technological achievements are noted in the next section along with information about the JAL FHCC accomplishments and VLER Health accomplishments.

Q: How did the IPO improve communications and stakeholder engagement during FY 2012?

A: The further engagement of the IPO Advisory Board was a deliberate and substantial step to mature the IPOs communications with key stakeholders across both Departments and among the three Services. VLER Health communications were similarly enhanced along with direct communications with Departmental VLER staff.

Q: What did the IPO do to create a Capability Development Life Cycle Framework to capture the required documentation and milestone decisions for each phase of iEHR development, including funding and investment decisions?

A: The IPO developed an integrated Acquisition Framework that blended VAs Program Management and Assessment System (PMAS) and DoD's Business Capability Lifecycle (BCL) into a single IPO program management framework. This report explains the framework put in place for iEHR acquisition and how PMAS and BCL processes are used. This report also describes the documentation, milestones, and funding supporting the iEHR and VLER Health.

The IPO accomplished the results forecasted in the 2011 Report for 2012. IPO processes developed and matured, IPO executive and senior leaders joined the organization and expanded staffing and contract support, the iEHR Program developed an incremental design and requirements processes with early requirements documents approved, the IPO initiated outreach with the vendor community, completed technical specifications, launched early risk reduction efforts, and initiated and approved plans for FY 2013. Part 2 of this report details the progress made by the IPO during FY 2012.

PART 2: IPO Progress in FY 2012

At the start of FY 2012, the Departments' adoption of a new charter for the IPO was an important milestone. The new charter spelled out the Departments commitment to fulfill the purpose intended for the IPO as that purpose was set forth in the IPO founding statute. Along with the charter, the IPO brought new senior leadership on board between November 2011 and March 2012, beginning with the Principals of the divisions of the IPO, and adding the Director and Deputy Director at the end of February 2012. The IPO Principals include the co-program managers for the iEHR Program, the program manager for the VLER Health Program, the lead of the Technical Division, the lead of CIRD, the lead of the IPO Executive Secretariat to manage strategic communications, and the lead of the Business Operations Division providing support in contracting, finance, human resources, and other acquisition management processes.

The IPO matured in FY 2012 in terms of staffing, facilities, processes, and programmatic progress to be able to fulfill its responsibilities as defined in the new charter. The IPO increased staffing by filling 141 of the 236 permanent positions planned for the IPO with permanent federal civilian employees or existing Departments employees on detailed assignments to the IPO. During the year, 171 contract staff members supported the government staff.

To appropriately house the increased number of employees, the IPO added more office space to its facilities. At the beginning of the year the IPO occupied one-half of an office building floor. By the end of the year the IPO expanded to acquire the entire floor at its original location and a second entire floor in a nearby office building. This physical growth in staff and facilities will continue to completion and maintenance during FY 2013.

The IPO adopted, developed, and matured its internal processes in FY 2012. A new on-boarding process provided a quick transition into the IPO for new employees, including a technical boot camp to bring employees up to speed on the IPO's mission, vision, strategy, and progress. An Agile management orientation began at the end of calendar year 2012. Other processes implemented in the IPO included the Acquisition Framework, the management of workflow

through the Executive Secretariat Division, and an internal governance process for technical, financial, human resources, and other management review boards.

Progress in the two major IPO programs – iEHR and VLER Health – was substantial during FY 2012. It included the development of the incremental plan for iEHR deployment, and defining the overarching schedule, design, and costs for the program. VLER Health achieved a “Go” decision from the Departments JEC for a focused deployment of VLER Health Exchange.

Throughout all iterations of the incremental stages of developing the iEHR and VLER Health programs, IPO and Departmental processes are continuously monitored for compliance with the most up-to-date security standards and safeguards in the information technology industry. With the efforts of the Secretaries of the two Departments providing the necessary resources, the IPO is now on solid footing to be able to achieve the critical missions of the iEHR and VLER Health Programs.

Programs in FY 2012

Integrated Electronic Health Record (iEHR)

The iEHR is the electronic health information management system in joint development by the Departments through the IPO. The iEHR will ultimately enable sharing of healthcare information between the Departments, and private sector healthcare providers. A single iEHR system used by the two Departments will facilitate maintaining a comprehensive health record for a beneficiary from the time of initial entrance into military service to the reception of final benefits. The goal of the single iEHR is to improve quality of care while reducing expenses by replacing the separate legacy EHR systems currently used by the Departments.

Combining the efforts of the Departments toward developing a single iEHR required combining the acquisition policies and cultures of both Departments into an integrated acquisition process to guide the development of the iEHR. During FY 2012 the IPO developed the Integrated Acquisition Framework to integrate the Departments acquisition policies, procedures and best practices. At the overall Program level, and at the Increment level, the iEHR program operates under DoD’s Business Capability Lifecycle (BCL) structure. At the project level or capability level the IPO uses VAs Program Management Accountability System (PMAS). This Acquisition Framework is shown in Figure 7.

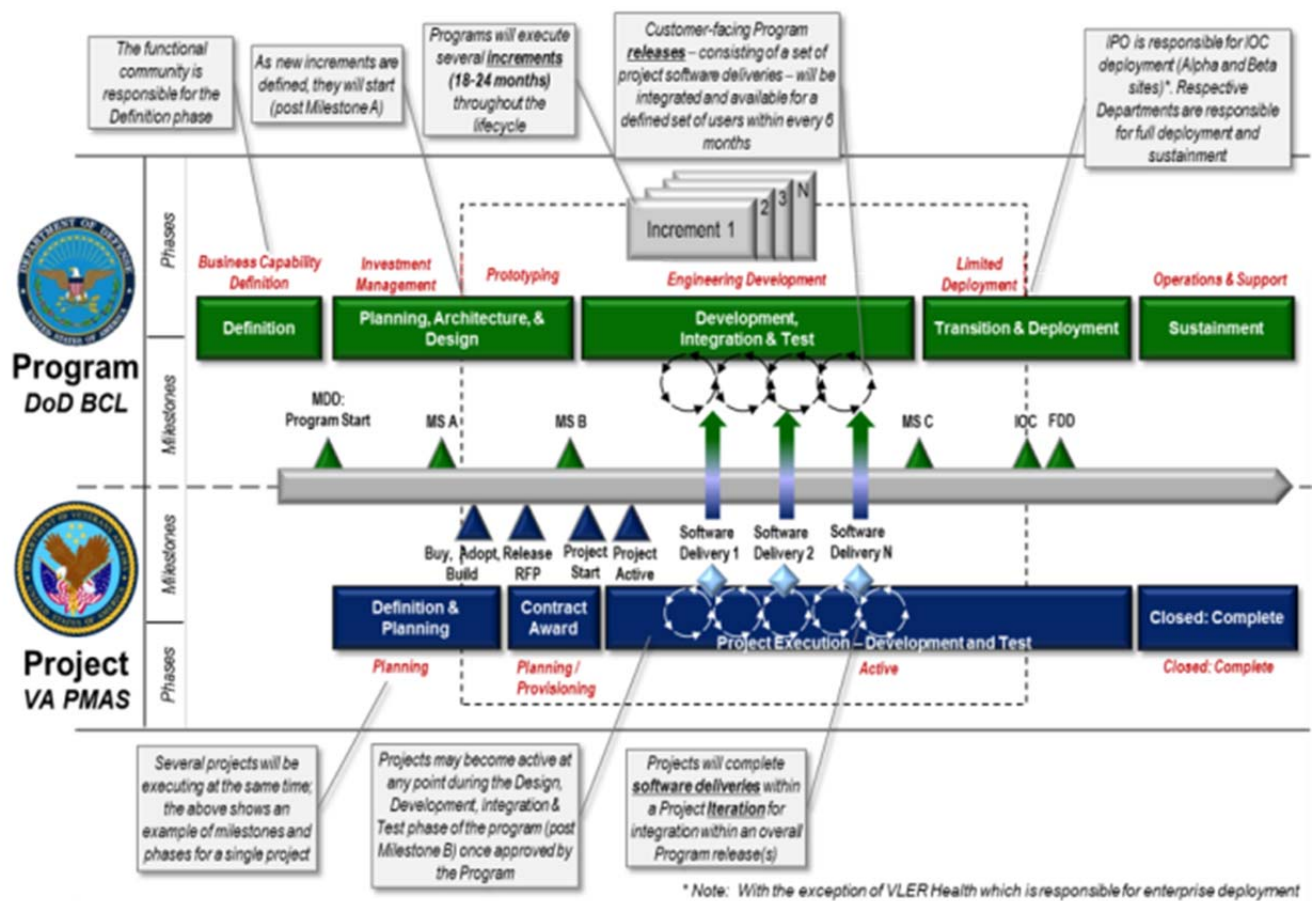


Figure 1 – Acquisition Framework using BCL and PMAS

The IPO is applying a disciplined and systematic Agile development approach using the SCRUM methodology in all aspects of the iEHR lifecycle, inclusive of requirements development, acquisition, program management, engineering, development, testing, and deployment. This is a shift from a traditional waterfall approach to an incremental and iterative approach where the functional, program management, and technical communities work collaboratively and continuously throughout the lifecycle of projects. Figure 2 shows the preference of Agile development over that of traditional Waterfall development. For example, Agile development emphasizes working software over comprehensive documentation. That does not mean that

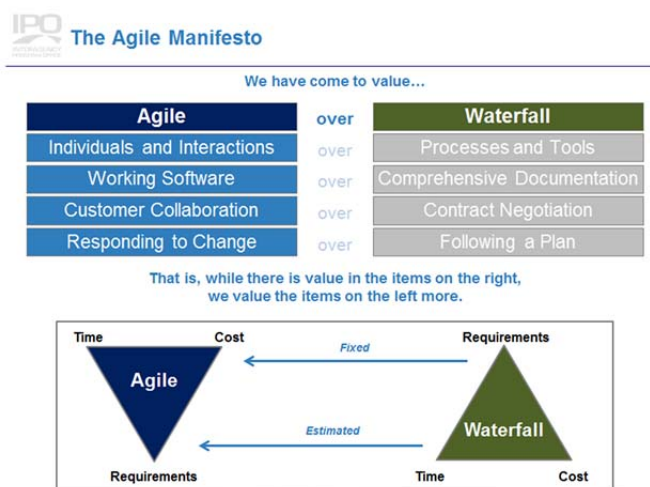


Figure 2 – The Agile Approach

documentation is not important; it means that success is measured by working software, not documentation artifacts. Additionally, documents are matured over the life of the program and retain their value to users.

The IPO refined the Agile development process into a “Gated Agile” process. This is important to the management of enterprise level systems development efforts. Figure 3 shows this gated agile approach where key stakeholders define the overarching themes that describe the system goals, Product Managers synchronize the releases, and Product Owners lead the system development. The gates are the assessment points found in both BCL and PMAS and cover Milestones A, B, and C for BCL, as well as Milestones 0, 1, 2, etc., for PMAS.

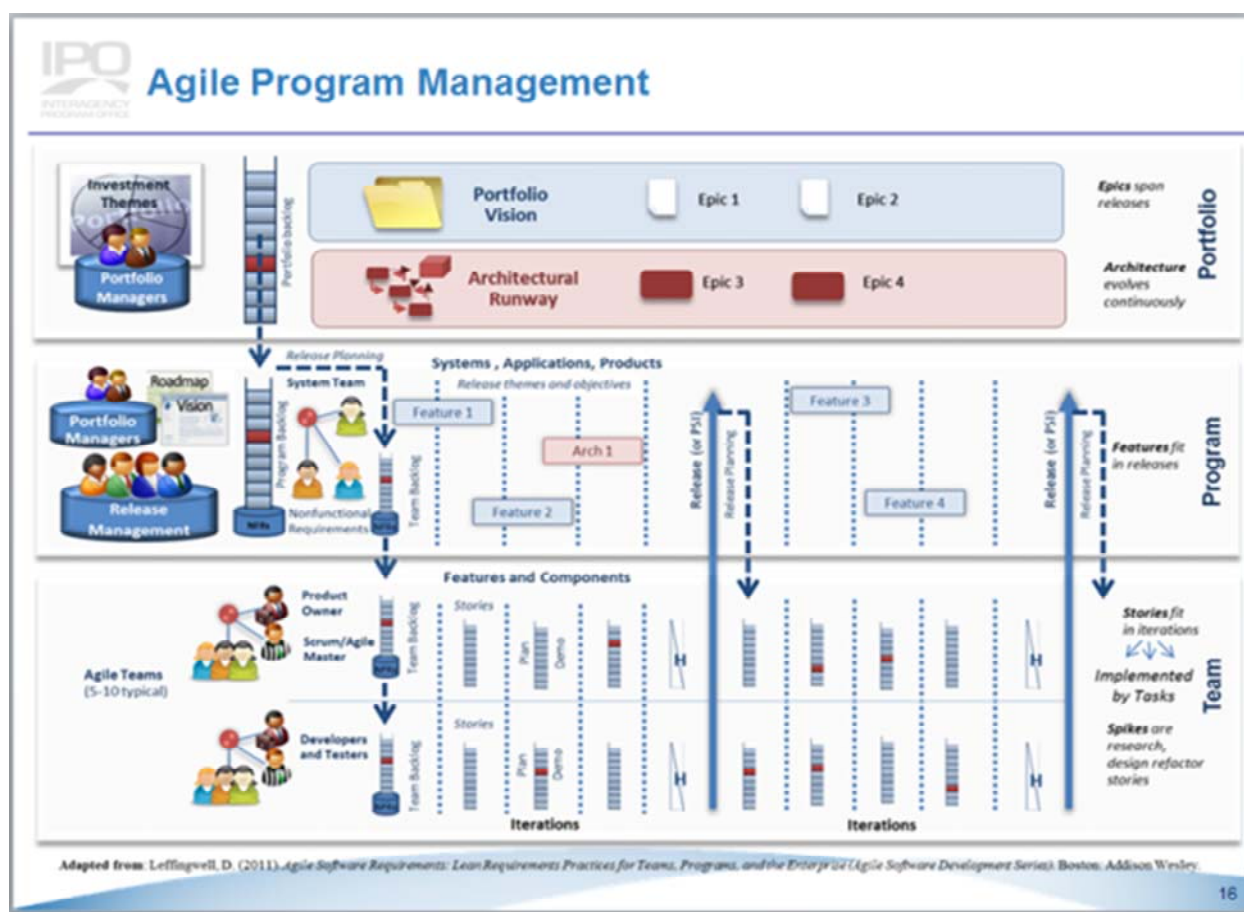


Figure 3 – The Gated Agile Approach

The scope of the iEHR solution includes 54 joint capabilities that the Departments agree address clinical and infrastructure requirements to establish the EHR management system (see Figure 4). Capabilities will be delivered through six planned increments in an agile approach taking into consideration functional priority, technical feasibility, and financial viability. These fifty-four joint capabilities are being reviewed by the Interagency Clinical Informatics Board

(ICIB) to determine whether similarities among the capabilities could result in a reduction in the total number of joint capabilities. This assessment, a recurring process throughout the iEHR system development process, will be completed in early FY 2013 as the IPO is developing an update for the Program Office Life Cycle Cost Estimate (LCCE).

Figure 4 – The Six Increments for iEHR

The ICIB is also reviewing Department-unique capabilities – 16 for DoD and six for VA. Many of these Department-unique capabilities are expected to be combined into the joint capabilities where similarities in capabilities exist. For example, the pediatrics requirements for DoD could be included in the clinical documentation capability by adding a few more screens supported by pediatric-unique data without significant additional costs. By combining the Department-unique requirements into the joint capabilities, it is expected that the value of the iEHR to the Departments will rise significantly.

As the development of capabilities progressed during FY 2012, iEHR activities primarily focused on architecture, design and infrastructure services that form the baseline for future clinical capabilities. Key accomplishments during the year included the following:

- Defined Program Baseline (Requirements, Architecture, Design, Cost Performance)
-
- Provided Allergies Write-Back capability in Joint Legacy Viewer (JLV) (formerly named JANUS) Graphical User Interface (GUI)
- Completed requirements documents for Laboratory, Pharmacy, Identity Management, Access Control, and Presentation Layer capabilities
- Achieved Development and Test Center (DTC) / Development and Test Environment (DTE) Initial Operational Capability (IOC)
- Established an Architecture & Engineering Integrated Product Team (IPT) to identify, manage and implement work streams focused on key aspects of the iEHR architecture and engineering processes and principles
- Conducted Transition Planning summit to define key milestones and determine next steps / assign resources
- Technical Division established under IPO and Technical Director announced
- Developed Architecture & Engineering IPT Charter to define roles and responsibilities
- Completed Gartner Assessment of current iEHR infrastructure planning efforts to provide an external perspective to highlight gaps, dependencies, risks, and considerations for moving forward
- Defined high-level milestones and timeline for existing work streams required to develop infrastructure capabilities
- Developed Data Management Strategy and Roadmap
- Conducted first quarterly Technical Division summit to achieve consensus on roles, responsibilities, and engineering strategy
- Completed initial draft of iEHR Capstone Systems Engineering Plan (SEP) and distributed for review and feedback
- Released initial version of Technical Specifications Package and Summary
- Finalized Service Oriented Architecture (SOA) Services Catalogue
- Developed Architecture Standards & Compliance Criteria
- Identified technical Points of Contact (POCs) for 20 iEHR Project Managers to assist with planning and execution activities from a technical perspective
- Released second version of Technical Specifications Package and Summary
- Completed Portal Framework assessment of Performance and Viability Testing

- Established Deployment and Implementation workgroup to define major milestones, key membership, and draft timeline to develop Enterprise Deployment Strategy that will help define deployment roles and responsibilities
- Released Technical Specifications Request For Information
- Initiated development of Sourcing Methodology Procedure and Policy
- Developed and received approval for Network & Security Architecture (Joint Medical Communities of Interest)
- Finalized Recruitment Packages for both VA and DoD IPO resources and released vacancy announcements; conducted panels for 36 VA positions
- Health Data Dictionary (HDD) Mapping contract awarded; conducted project kick-off meeting
- Awarded Architecture Support contract to assist with definition and finalization of required architecture artifacts
- Developed report for Secretaries on JLV GUI Deployment / Maturity Plan that delivers requested functionality for Initial Operating Capability (IOC)
- Defined “Technical Feasibility” for IOC and gained buy-in from functional / clinical community
- Prepared and released Integration contract package for design, development, and integration support
- Finalized Architecture artifacts required for iEHR Increment 1

Another accomplishment in the iEHR program was the establishment of the IPO Clinical Information and Requirements Division (CIRD). In July 2012 CIRD became an active IPO division to promote safe, effective and efficient patient care by ensuring a continuous clinical focus throughout the development and implementation of iEHR. CIRD acts as a bridge to ensure that the process of improving technological systems to manage health care records takes into consideration the perspectives of Service member and Veteran patients and their health care providers. Through CIRD, the patients and providers who will rely on iEHR have a voice in the development of the technological system that will store and provide access to their medical records.

The CIRD organizational structure includes eight branches:

Clinical Quality	Clinical Research
Clinical Requirements	Clinical Specialties
Clinical Information Systems Adoption	FHCC Demonstration Project
Clinical Innovation	Patient and Provider Experience

During FY 2012, CIRD contributed to the progress of building the iEHR with the following achievements:

- Hosted first IOC Discussion between DoD/VA Interagency Clinical Informatics Board (ICIB) and IPO
- Completed first draft of Clinical Quality (CQ) branch metrics
- Gained IOC definition concurrence between ICIB and IPO
-
- Launched CQ branch research on clinical benefits of SSO-CM capabilities
- Received resources to start conducting IOC Clinical Effectiveness Study
- Finalized Memorandum of Understanding (MOU) between the IPO and Telemedicine Advanced Technology and Research Center (TATRC)
- Submitted draft Clinical Physician Order Entry (CPOE) and Clinical Decision Support (CDS) Component Improvement Program Team [CIPT] packages to the Functional Coordinating Groups
- Draft pharmacy demo-scripts completed to be included in the Pharmacy Request For Proposals
- Finalized North Chicago Stakeholder Analysis – Clinical Information Systems Adoption (CISA)
- Completed FHCC Lessons Learned Program and validating Lessons Learned
- Completed Deployment Management Templates to be submitted to the ICIB
- Began Clinical Information Systems Adoption IOC site visits (FHCC North Chicago; Hampton Roads; San Antonio)
-
- Project Level Requirements posted to Military Health System website
- Inserted requirements into the interim tool, IBM Rational Jazz Suite [™]
- Hosted the follow-up Pharmacy IOC definition to ensure pharmacy plans are included in the final IOC definition
- Collected all CIRD metrics for success of IOC to be in alignment with all work from the JEC
- Released vacancy announcements for DoD leadership positions: Clinical Requirements Lead, Clinical Requirements Manager, Branch Chief for Patient and Provider Experience
- Completed 30, 90, 180, 365 Day Plans for CIRD Branches
- Acquired approval of VA Position Descriptions by the Resource Management Committee
- Prepared and sought final approval of the integrated Project Level Requirements Document (iPLRD) and Enterprise Level Clinical Quality Requirements (ELCQR) by the Health Executive Council (HEC)

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The clinical focus brought into iEHR developments through CIRD added to technological and organizational accomplishments in the iEHR Program during FY 2012. The infrastructure and clinical requirements developing into comprehensive plans for the iEHR system also lay the building blocks for success in the VLER Health Program.

Virtual Lifetime Electronic Record (VLER) Health

VLER Health contains the portfolio of programs that manage the electronic exchange of clinically relevant health information between the Departments and other government and private sector health exchange partners. The Departments have implemented the VLER Health Exchange pilot at four joint locations, partnering with private sector health information exchange (HIE) organizations. Additionally, VA has partnered with private sector HIEs in implementing the VLER Health Exchange at seven more locations. Figure 5 shows the eleven sites.

Figure 5 – VLER Health Exchange Locations

By the beginning of FY 2012, the Departments achieved the ability to exchange health information with a private sector HIE partner at the fourth and final joint pilot site in the Puget Sound region of Washington. HIE activities continued throughout FY 2012 at all four joint pilot

locations. Early in FY 2012, VA began HIE activity in Buffalo New York, Minneapolis Minnesota, Charleston South Carolina, Salt Lake City Utah, and Grand Junction Colorado. By the close of FY 2012 VA established HIE in Altoona Pennsylvania and in San Diego, California.

The Departments achieved the ability to exchange a foundational health data set using the eHealth Exchange, formerly named the Nationwide Health Information Network (NwHIN). The eHealth Exchange is an initiative led by the Department of Health and Human Services Office of the National Coordinator for Health Information Technology (HIT). The eHealth Exchange is a confederation of trusted entities bound by mission and governance to securely exchange health information. The Departments were flagship eHealth Exchange participants, and the IPO is positioned to take a lead role in the two Departments' joint HIT programs in the broader HIE arena.

A companion initiative to the eHealth Exchange is The Direct Project. The Direct Project expands existing ehealth Exchange standards and service descriptions to provide easier access to nationwide secure exchange of health information for a wide set of providers and organizations. VLER Health is the IPO program through which the Departments, as participants in the eHealth Exchange, share expertise and capabilities for the Direct Project.

FY 2012 IPO eHealth Exchange and Direct Project Activities include the following:

-
- DoD and VA have assisted the eHealth Exchange as it has become independent of ONC in the past year. DoD and VA have also participated in the review of the organizational documents and plans for the private non-profit corporation, HealtheWay, Inc as it was being formed and will serve as Government Liaisons once membership is completed. HealtheWay, Inc will be providing services to the DoD and VA in the form of testing, specifications, and security certificates for the memberships.
- Meeting with the Texas State Health Authority and San Antonio HIE to gauge their ability to stand up Exchange and Direct capability. Subsequent meetings are planned, including possible site visits to San Antonio VA and Military Treatment Facilities when appropriate
- Consolidation of DoD and VA exchange and Direct program management at the IPO
- Continuing DoD business discussions for including non-active duty members in VLER Health Exchange
- Entry of DoD Direct Project Innovation Initiative (DPII) into the accreditation and certification process for Stage 1 (of 3 initiative stages)
- Submission by DoD to the Joint Health Operations Council for approval a proposed location for a Direct Project pilot

- Communications by IPO senior staff with local health exchanges and providers in Washington DC, Alaska, Hawaii, Guam, Rhode Island, Connecticut, Texas, Nebraska, Idaho, California, Florida, and Pennsylvania about implementing Direct Project exchanges with VA facilities. Discussions centered around guiding private sector providers in configuration of software, acquisition of Public Key Infrastructure (PKI) certificates, and business process redesign to prepare for pilots.

The VLER Health Program continues to evolve to enable secure, electronic health care information sharing among DoD, VA, and their health care partners.

James A. Lovell Federal Health Care Center (JAL FHCC)

The JAL FHCC is a fully integrated health care facility in North Chicago staffed and operated by the Departments personnel. The facility brings together into a single operation, two health care facilities that were formerly operated separately in the same geographic area by the Department of the Navy and the Department of Veterans Affairs. The JAL FHCC provides care for Service members, Veterans, and beneficiaries of TRICARE, the health care program for retired military members and their families.



Figure 6 – James A. Lovell Federal Health Care Center

The IPO manages ongoing and future joint development and sustainment efforts for the software development life cycle in the JAL FHCC demonstration project. One of the eight Branches of CIRD in the IPO is dedicated to the JAL FHCC project. The CIRD FHCC Branch will share lessons learned from the JAL FHCC project that will inform ongoing development of the iEHR program.

The Departments maintained, deployed, and refined the following IT capabilities for the JAL FHCC during FY 2012:

- Deployed first component of iEHR modernized system architecture. iEHR Presentation Layer enables viewing of patient information from both Departments legacy health care systems within a single graphical user interface (GUI). Healthcare data from different health care systems is presented in a combined view customizable to a health care providers prescribed workflow
- Deployed Laboratory Orders Portability (OP) and the first increment of Consults OP, the latter providing to FHCC health care providers the ability to share orders and updates. All OP capabilities give a provider, or authorized user on behalf of a provider, the ability to place or enter an order in the Departments clinical system and have the information available for another authorized user in either system
- Conducted maintenance and enhancement activities for Laboratory and Radiology OP services to provide additional functionality. Increment 2 of Consults OP, providing the ability to review consultation notes data, is expected February 28, 2013
- Enhanced Single Patient Registration to establish and maintain stability of the correlation of the Departments patient records. Through Single Patient Registration a patient record can be registered and updated via a single GUI employed by existing, separate Departments' systems. This facilitates maintenance of a single patient medical record while progress continues toward deployment of the integrated EHR system
- Improved access to two different Medical Single Sign-on (MSSO) products used by health care providers when they are delivering care to Service member and Veteran patients. MSSO permits secure electronic access to clinical information about a patient. FHCC health care providers gain access to MSSO with either a VA Personal Identity Verification Card or a DoD Common Access Card. Enhancements provided additional capability for access using either card
- Expanded Testing Platforms used to facilitate joint Departments end-to-end testing for all FHCC releases. Testing supports joint IT capabilities and ensures interoperability

The activities and accomplishments during FY 2012 in the JAL FHCC five-year demonstration project support the transition from the Departments' legacy health care IT systems to iEHR. Lessons learned at the JAL FHCC inform the process for using the legacy systems while establishing a single, integrated system.

Expenditures

Total joint spending by the Departments in FY 2012 in support of IPO activities was \$351.8 million. The following table provides details of respective funds obligated during FY 2012. The

level of funding in FY 2012 was sufficient to award several contracts (e.g. Program Management Support, IPO Corporate Enterprise, Agile, etc.) and to provide the IPO with the personnel required to expand integrated operations, which allows for a significant buildup of the required documentation and resources necessary for joint operations.

DoD/VA Spending

Item	DoD FY 2012	VA FY 2012	Total IPO
Gov't Staff	\$ 5,832,871.44	\$ 13,437,546.00	\$ 19,270,417.44
Training	\$ 164,000.00	\$ -	\$ 164,000.00
Travel	\$ 294,003.10	\$ 24,310.00	\$ 318,313.10
Supplies & Materials	\$ 717,051.00	\$ -	\$ 717,051.00
Rent/Real Property Services	\$ 2,204,073.00	\$ -	\$ 2,204,073.00
Support Services	\$210,910,074.36	\$118,271,694.29	\$329,181,768.65
Grand Total	\$220,122,072.90	\$131,733,550.29	\$351,855,623.19

Figure 7 – DoD/VA FY 2012 Spending

Program Challenges

The IPO faced and managed a number of challenges during 2012. The IPO overcame interagency coordination issues by physically placing the senior staff level iEHR program managers from each department in the IPO, by standing up the Technical Division and the CIRD in the IPO, and by exercising IPO governance and collaborating with the IPO Advisory Board. In a dynamic and ongoing process of developing a single, integrated EHR system for the Departments, IPO program, technical, and clinical informatics teams fully defined and scheduled joint Departments capabilities and processes for the Departments' iEHR.

To meet challenges of managing the sizable and complex task of modernizing the Departments' legacy health IT systems the IPO focused on building and maturing the IPO, designing the iEHR solution, exercising governance, reducing risk to the iEHR program, building iEHR technical infrastructure, and defining clinical and technical requirements. The IPO developed a integrated Acquisition Framework for iEHR acquisition, and established documentation, milestones, and funding supporting the iEHR and VLER Health Programs.

The VLER Health Program met the challenge of continuing to build relationships with private health care providers for information exchange through VLER Health. In FY 2012 IPO senior staff members interacted with local health exchange and provider partners in seven states to begin Health Information Exchange (HIE) activities, and in several more states and the territory of Guam to provide guidance in preparation for future VLER Health exchange sites.

Best practices in program management include regular use of a Risk Review Board (RRB) for the purpose of formally identifying risks, developing mitigations to those risks, and tracking the

progress of the mitigations. The IPOs RRB identified the following challenges facing the IPO for FY 2013:

- Converging Department-unique business operations and program execution policies into defined, standardized joint clinical workflows across the Departments and Military Branches to operate under a single governance process
- Normalizing existing data to a common model so that legacy healthcare data is available to the iEHR user
- Defining a sufficient requirements baseline (e.g., requirements, use cases, user stories) to support acquisition timeline and execution activities, aligned with capability priorities
- Determining the Information Assurance and Accreditation authorities and procedures that will apply across the Departments
- Implementing contracting policies and timelines to support Agile program management and execution
- Establishing single Development and Test Center / Environment (DTC/DTE) to support program milestone activities
- Building and modernizing the information technology infrastructure to support a modular Service Oriented Architecture (SOA) given the complexity of SOA development and implementation approach within an aggressive schedule and application of the Agile process
- Maturing enterprise-wide data exchange and interoperability standards
- Employing the Interagency cost-sharing Memorandum of Agreement between the Departments where the IPO is in control of the IPO funds, and where cost sharing is implemented

Formulating mitigating strategies for program challenges such as those described above is a routine IPO procedure throughout each fiscal year. These challenges, as well as the mitigations, inform program planning and development for FY 2013. Part 3 of this report provides an overview of anticipated progress in the coming year.

PART 3: IPO Plans for FY 2013

In FY 2013 the IPO will continue the development and deployment of iEHR Program Increments 1 and 2, together called the iEHR Platform. The iEHR Platform establishes the architecture and the infrastructure for the iEHR system, the linkage with legacy systems, the business processes, the initial clinical modules, and the capabilities deployed to DoD and VA medical treatment facilities. Completing the iEHR Platform provides the framework that supports the end-to-end development and deployment processes of the iEHR. Once this is done all subsequent iEHR

projects focus on development, installation, and deployment of iEHR applications that will run on the iEHR Platform.

Throughout FY 2013, planning and implementation of capabilities for the iEHR Platform will continue, and initial planning for Increment 3 will begin. The following capabilities will be included in FY 2013 activities toward completing the iEHR Platform:

- Access Control*
- Identity Management*
- iEHR GUI**
- Information Model and Terminology Services*
- Federated Data Repository / Data Warehouse*
- Network and Security Architecture*
- SOA Suite / ESB
- Pharmacy**
- Immunization**
- Portal Framework*
- Laboratory & Anatomic Pathology**
- Orders Service**
- Clinical Decision Support (CDS)**
- Documentation

<p>* Infrastructure capabilities that can span across increments</p> <p>** Initial delivery of capability that will span across increments</p>
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At the end of FY 2013 the IPO plans to have in place the infrastructure and core services to support clinical capability insertion into the new iEHR baseline.

The IPO is currently developing performance metrics that will be approved by the IPO Advisory Board and validated by the JEC Co-Chairs. These metrics will address health care quality improvement, provider and patient satisfaction, and IPO Program Management Office performance (cost, schedule, and performance). Examples of the program and system performance metrics include Documentation Effectiveness, Patient Data Retrieval, and Workflow Processing. When put into operation, these metrics will further ensure that the iEHR program is accountable for critical milestones, deliverables, and budget and spend plan targets.

The VLER Health Program plans are similarly focused on building capabilities throughout FY 2013. Goals include deploying and utilizing eHealth Exchange to authorize beneficiaries to receive care in the private sector, and to capture the documentation of that care as part of the complete iEHR record. In FY 2013, VLER Health will carry out the following activities:

- DoD Business Discussions continue for including non-Active Duty Members in VLER Health Exchange
- IPO Begins the initiation of implementation of ONC Issued Consolidation CDA specifications
- VA Deploys ehealth Exchange Direct Pilot in Washington, DC
- IPO assists ehealth Exchange with new interoperability specifications for conformance testing process for on-boarding new Exchange members
- IPO Sponsors VLER Health Strategy Implementation Meeting
- DoD Direct pilot site selection pending Joint Health Operations Council approval
- Pilot for mammograms purchased from same private sector provider for Veterans and Service members goes into production
- VLER Health Execution and Implementation Plan 2013-2014
- Provide to the Departments JEC a report focusing on progress and plans to:
 - Identify and prioritize best opportunities to maximize early ROI
 - Define the next VLER Health decision points and iEHR milestones to track the timeline of IPO deliverables

In the IPO oversight mission at the JAL FHCC, the CIRD FHCC Branch will perform analyses of deployed solutions to improve the integration of new products into workflows. The CIRD team will assist in removing barriers to adoption by promoting business process reengineering and product effectiveness recommendations, and will assist in applying the recommendations in the progression of business process improvement efforts. Additionally, the CIRD team will conduct a thorough review of JAL FHCC Demonstration Project planning documents to collect, share, and validate application of lessons learned throughout the JAL FHCC Demonstration Project life cycle. Finally, the team will provide guidance in the modification of policy (e.g., information assurance/information security, local instructions) to assist in reducing any effect of inhibiting or constraining organizational policies.

The IPO plans for FY 2013 for its three missions - the integrated EHR (iEHR), the Virtual Lifetime Electronic Record (VLER) Health, and providing leadership, management and oversight for related programs - build on accomplishments in those missions during FY 2012. Near-term IPO plans will enable continuing progress in serving the purposes for which the IPO was established.

CONCLUSION

During FY 2012 the IPO gained momentum in constructing a single electronic system to contain and manage all EHRs for Service members and Veterans, and in developing capabilities for secure exchange of the health information in those records among health care providers and

entities in a nationwide network. New IPO leadership and a refreshed approach to progressing through projects stood up to meet the scope and complexity of these initiatives. Completing a year of building on the foundation laid for the work of the IPO, progress will now continue toward achieving the goals that will result in realizing the vision of having EHR systems or capabilities for the Departments that allow for full interoperability and secure exchange of health care information.

ACRONYMS

Acronym	Definition
AHLTA	DoD's electronic health record
BCL	DoD Business Capability Lifecycle
CDA	Clinical Document Architecture
CDS	Clinical Decision Support
CHCS	Clinical Health Care System
CIPT	Component Improvement Program Team
CIRD	IPO Clinical Information and Requirements Division
CISA	Clinical Information Systems Adoption
CPOE	Clinical Physician Order Entry
CPRS	Computerized Patient Record System
CQ	Clinical Quality
DHRA	Defense Human Readiness Agency
DoD	Department of Defense
DPPI	DoD Direct Project Innovation Initiative
DTC/DTE	Development and Test Center / Development and Test Environment
EHR	Electronic Health Record
ELCQR	Enterprise Level Clinical Quality Requirements
ESB	Enterprise Service Bus
FY	Fiscal Year
GUI	Common Graphical User Interface
HDD	Health Data Dictionary
HEC	VA/DoD Health Executive Council
HHS	Department of Health and Human Services
HIE	Health Informational Exchange
HIT	Health Information Technology
ICIB	DoD/VA Interagency Clinical Informatics Board
iEHR	Integrated Electronic Health Record
IOC	Initial Operational Capability
iPLRD	integrated Project Level Requirements Document
JAL FHCC	Captain James A. Lovell Federal Health Care Center
JLV	Joint Legacy Viewer (formerly named JANUS)
IPO	DoD/VA Interagency Program Office
IPT	Integrated Product Team
IT	Information Technology
JEC	VA/DoD Joint Executive Council
MOU	Memorandum of Understanding
MSSO	Medical Single Sign On
NDAA	National Defense Authorization Act
NwHIN	Nationwide Health Information Network (now named eHealth Exchange)

Acronym	Definition
ONC	Office of the National Coordinator for Health Information Technology, Department of Health and Human Services
OP	Orders Portability
PKI	Public Key Infrastructure
PMAS	VA Program Management Accountability System
POC	Point of Contact
ROI	Return on Investment
SCRUM	* not an acronym – a framework structured to support complex product development
SEP	Systems Engineering Plan
SOA	Service Oriented Architecture
SSO-CM	Single Sign-on and Context Management
TATRC	Telemedicine Advanced Technology and Research Center (U.S. Army)
TMA	Tricare Management Activity
VA	Department of Veterans Affairs
VistA	Veterans Health Information Systems & Technology Architecture
VLER	Virtual Lifetime Electronic Record

* http://www.scrum.org/Portals/0/Documents/Scrum%20Guides/Scrum_Guide.pdf