INTERAGENCY PROGRAM OFFICE

Annual Meeting of the DoD Task Force on the Care, Management, and Transition of Recovering Wounded, Ill, and Injured Members of the Armed Forces

Monday, January 14th, 2013, 2:15-3:15 p.m.

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

Purpose

- Address the Members of the DoD Recovering Warrior Task Force (RWTF) on the IPO’s effectiveness in accomplishing fully interoperable electronic health records. This is one of the Task Force’s legislative required mandates.

Primary Objectives

1) To discuss key deliverables, key accomplishments, and challenges
2) To provide status of the IOC at the iEHR pilot sites
3) To furnish an update on the iEHR, VLER Health, and JAL FHCC
4) To update the RWTF on implementation efforts of iEHR Capability Set 1
5) To discuss what changes are needed outside the IPO to enable it to successfully fulfill its mission
Secretary Panetta and Shinseki held a joint news conference Dec. 6

The Secretaries announced that they will “meet or beat” the planned schedule for iEHR deployment

The departments are expected to approve a new schedule for the iEHR next month.

When iEHR deployment is complete, it will serve 7.8 million Veterans and 9.7 million military personnel through 59 military hospitals and 152 VA hospitals with a combined staff of more than 350,000.
The IPO’s current efforts are focused on the development and implementation of iEHR, VLER Health, and the oversight of JALFHCC.

Integrated Electronic Health Record (iEHR)

- Joint DoD-VA program to modernize legacy EHR capabilities and create a single common health record throughout the continuum of care and life of a patient
- Will replace DoD’s AHLTA and VA’s VistA systems

Virtual Lifetime Electronic Record (VLER) Health

- White House initiative to exchange data between DoD, VA, other Federal agencies, and private providers based on national standards
- Will enable comprehensive health, benefits, and administrative information, including personnel records and military history records
- Four joint DoD-VA pilots demonstrated exchange of health data in San Diego, Tidewater, Spokane, and Puget Sound, 12 VA locations
- IPO will focus its efforts on the VLER Health (health data exchange) for clinical treatment

Oversight Mission JALFHCC

- Five-year demonstration project is the first integrated facility of its kind, serving both DoD and VA populations
- The North Chicago Veterans Affairs Medical Center and the Naval Health Clinic Great Lakes merged to become the Captain James A. Lovell Federal Health Care Center on October 1, 2010

Delivery of seamless Health Care and Benefits
KEY ACCOMPLISHMENTS AND CHALLENGES
FY 2012 IPO Key Accomplishments and Activities - iEHR

- Defined Program Baseline (Requirements, Architecture, Design, Cost)
- Implemented Single Sign-on and Context Management (SSO-CM) capabilities at site in San Antonio
- Provided Allergies Write-Back capability in on JANUS-based Graphical User Interface (GUI)
- Completed requirements documents for Lab, 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 level-set 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
FY 2012 IPO Key Accomplishments and Activities – iEHR (Continued)

- 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 Liferay 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 JANUS 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

Delivery of seamless Health Care and Benefits
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:

1. Assisting HealtheWay, Inc., a partner in eHealth Exchange, with new interoperability specifications for the conformance testing process for on-boarding new Exchange members.

2. 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.

3. Consolidation of DoD and VA exchange and Direct program management at the IPO.

4. Continuing DoD business discussions for including non-active duty members in VLER Health Exchange.

5. Entry of DoD Direct Project Innovation Initiative (DPII) into the accreditation and certification process for Stage 1 (of 3 initiative stages).

6. Submission by DoD to the Joint Health Operations Council for approval a proposed location for a Direct Project pilot.

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 VA and DoD 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 VA or DoD 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 VA and DoD patient records. Through Single Patient Registration a patient record can be registered and updated via a single GUI employed by existing, separate VA and DoD 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 VA/DoD end-to-end testing for all FHCC releases. Testing supports joint IT capabilities and ensures interoperability.
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
CQ Branch completed 30, 60, 180, 360 day plan
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)
Sought final approval of the integrated Project Level Requirements Document (iPLRD) by the Health Executive Council (HEC)
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 Joint Executive Council (JEC)
Released vacancy announcements 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
Planned for ICIB approval of iPLRD
Planned for HEC approval of Enterprise Level Clinical Quality Requirements (ELCQR)
IPO Key Accomplishments Continued – Technical Division

- Released second version of Technical Specifications Package and Summary
- Completed Portal Framework assessment of Liferay 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 RFI
- Initiated development of Sourcing Methodology Procedure and Policy
- Developed and received approval for Network & Security Architecture (Joint Medical COI)
- Finalized Recruitment Packages for both VA and DoD IPO resources and released vacancy announcements; conducted panels for 36 VA positions
- HDD Mapping contract awarded to LongView and conducted project kick-off
- Awarded Architecture Support contract to assist with definition and finalization of required architecture artifacts
- Developed report for Secretaries on JANUS-based GUI Deployment / Maturity Plan that delivers requested functionality for 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 Increment 1
- Acquired EA Tool and Report Capability license & support
- Received responses from industry on TSP RFI; finalized analysis of responses and defined areas of improvement in the TSP
- Began transition from IPTs and workstreams into formalized Scrum teams, with a technical backlog
- Conducted pilot training session of the IPO Technical Essentials course
Program Challenges/IPO Concerns

- 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 DoD and VA
- 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
- Employing the Interagency cost-sharing MOU between the DoD and VA where the IPO is in control of the IPO funds, and where cost sharing is implemented.
- Concurrence on Test Strategy
  - Agreed-to way ahead with DASD(DT&E) on test approach and technical parameters
  - Working with DOT&E to mitigate perceived risk regarding co-existence of Increment 1 and Increment 2 architectures
- NDAA Restriction of Funds
  - If DoD is unable to transfer funds to VA, iEHR development efforts will be delayed
- Delays from Continuing Resolution
  - Need to obtain funds certification for FY13 in order to obligate funds the IPO receives
- Program Plan Execution
  - Specific application of agreed-to cost sharing principles
  - Affordability
  - Aggressive Schedule

Delivery of seamless Health Care and Benefits
iEHR Implementation by 2017

The iEHR is a complex undertaking for the following reasons:

1. Composed of joint DoD and VA capabilities
   - Composed of unique requirements and potential unique solutions
   - Each capability is like a program in and of itself
   - 30+ separate teams coordinating to deploy released on 6 month cycles.

2. Cannot “rip and replace” as a method of upgrading
   - New clinical capabilities must work with both legacy systems and new systems during development of iEHR.

3. iEHR reliance upon common standard business practices between both Departments
   - Workflow for any one clinical capability requires development and concurrence between doctors, nurses, and technicians.
   - Unprecedented business process reengineering on this scale.
4. Large scope:
   • Service to over 18 million beneficiaries with...
   • 440 thousand care providers in...
   • 211 hospitals with...
   • 1171 clinics, 482 dental clinics, and...
   • Over 209 million outpatient visits per year.
   • 229 data centers consolidated into 9 regional sites

5. The complete infrastructure that supports the iEHR will be replaced.

6. Everything must also operate in mobile, deployed, and remote environments.

7. Single medical network and security enclave that supports the seamless transfer of medical information between doctors and nurses in the VA and DoD, as well as the three Services (a key lesson learned from the North Chicago effort).
Delivery of seamless Health Care and Benefits
IEHR
iEHR Program Overview

**Business Need (Problem Statement):**

*Integrate DoD/VA Medical Records and Applications*

- Patient information physically exist in different paper and electronic formats maintained in different places
- Fragmented medical records are not interdepartmentally or externally accessible and cannot be organized into a logical or actual longitudinal patient health record
- VA and DoD have healthcare legacy systems and data stores that must be modernized to continue to provide and improve quality of care

**Program Specifics**

- DoD and VA are committed to delivering iEHR capabilities in the next 5 years – a task that will be accomplished through incremental delivery of Electronic Health Record (EHR) components
- iEHR will impact the DoD and VA combined beneficiary population (18 million people) and practitioners (440,300 providers)
- iEHR scope provides Health Information Technology for
  - DoD medical facilities: 22 medical centers, 59 hospitals, and 364 medical clinics
  - VA medical facilities: 288 Veteran centers, 152 hospitals, and 807 medical clinics

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**iEHR Description**

A DoD/VA collaborative effort to share Health Care business and system resources

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**System Capability**

- 54 Joint DoD/VA Capabilities delivered in 6 Increments
- **Increment 1:** Single Sign-on (SSO), Context Management (CM), JANUS Graphical User Interface (GUI) Pilot, and Risk Reduction efforts
- **Increment 2:** Presentation Layer, Lab, Immunization, Pharmacy, Clinical Decision Support, Orders Service, Documentation, and supporting infrastructure

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The iEHR will impact the DoD and VA combined beneficiary population (18.3 million people) and practitioners (440,300 providers)

**Who We Serve**
- Service members
- Veterans
- Their families
- Other beneficiaries
- Operational Commanders
- Military Health System community
- VA community

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<th></th>
<th>DoD</th>
<th>VA</th>
<th>Total</th>
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<tr>
<td><strong>Total Beneficiaries</strong></td>
<td>9.7 Million</td>
<td>8.6 Million</td>
<td>18.3 Million</td>
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<td><strong>Health Care Providers</strong></td>
<td>325,000</td>
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<td>440,300</td>
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<td><strong>Hospitals</strong></td>
<td>59</td>
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<td>364</td>
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<td>282</td>
<td>200+</td>
<td>482+</td>
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<td>1,169,003</td>
<td>692,100</td>
<td>1,861,103</td>
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<td>129,152,879</td>
<td>79,800,000</td>
<td>208,952,879</td>
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<td><strong>Host Sites</strong></td>
<td>101</td>
<td>128</td>
<td>229</td>
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**What We Do**
- Lead DoD and VA in the development and implementation of iEHR and VLER Health
- Lead, oversee, and manage, inform and otherwise complement other information sharing initiatives within DoD and VA
- Accelerate the exchange of health care information

**Why We Do It**
- Empowered Patient Care Model
- Robust Learning Health System
- Enhanced Access to Quality of Care
- Enhanced Patient Safety
- Enhanced Health Outcomes
- Improve the value proposition: increase quality of care for every dollar expended
The iEHR will be the modernization of legacy EHR capabilities, which are the product of over 40 years of development and innovation.

Evolution of DoD/VA Electronic Health Records

Department of Veterans Affairs

1964: VA selects MUMPS as the primary programming language for CHOP
1964: CHOP expanded graphical user interface (GUI) adopted nationwide
1996: Computer functionally greatly expanded
1996: Vista introduced
2005: Vista imaging system integrates clinical images, scanned documents, and other non-textual data into the electronic medical record
2006: VA/DoD Health IT Sharing Program originally launched in 2000 becomes fully federated with several initiatives exchanging clinical data
Mar 2003: WorldVista was formed and incorporated as a not-for-profit organization
2007: WorldVista developed a╱a proprietary Electronic Health Record system
2017: VA Health IT Quality Advisory Committee
2019: Blue Button operationally delivers veterans their personal health information from ICA.
2019: HealthCare.gov launches its Open Message Initiative (OMI), a web-based, encrypted communication platform designed to help patients and providers share health information securely.

Department of Defense

1984: CHCS begins development of a DoD patient computer system
1984: CHOP (Central Hospital Computer) programs the VA's first electronic information system with tailored software
1987: VA selects MUMPS as the primary programming language for CHOP
1996: Computer functionally greatly expanded
1996: Vista introduced
2005: Vista imaging system integrates clinical images, scanned documents, and other non-textual data into the electronic medical record
2006: VA/DoD Health IT Sharing Program originally launched in 2000 becomes fully federated with several initiatives exchanging clinical data
Mar 2003: WorldVista was formed and incorporated as a not-for-profit organization
2007: WorldVista developed a╱a proprietary Electronic Health Record system
2017: VA Health IT Quality Advisory Committee
2019: Blue Button operationally delivers veterans their personal health information from ICA.
2019: HealthCare.gov launches its Open Message Initiative (OMI), a web-based, encrypted communication platform designed to help patients and providers share health information securely.

Delivery of seamless Health Care and Benefits

On Oct 27, 2011, IPO Charter signed to serve as the single point of accountability for the implementation of the iEHR.
Delivery of seamless Health Care and Benefits

The IPO will develop and implement the iEHR utilizing a ‘Best of Breed’ approach to provide the most effective long-term solution

iEHR Best of Breed Solution

Pros
▲ Cost: Healthy competition in EHR space leads to better solutions at lower costs
▲ Open Source: Creates Open Source development opportunities
▲ Benefit Timeliness: Rapid delivery of clinically-relevant capability
▲ “Future-Proofed”: Allows replacement/enhancement of individual capability modules
▲ National Strategic Alignment: Infrastructure ESB services, data architecture and standards are primary components of national alignment
▲ Quality: Encourages vendors to build flexibility, content expertise, and workflow analysis into their products
▲ Responsible Spending: Capitalizes on previous GOTS investments by reusing or repurposing mission-specific solutions
▲ Communication/Collaboration: Increased alignment between Departments and increased use of SOA
▲ Efficiency: Enhances alignment between systems and workflows through prioritization of end-user requirements
▲ Patient Safety: Customization allows site-specific alerts and reminders
▲ Population Health: Common data model and data centers allow improved delivery of population health
▲ Clinician & Patient Benefit: Best solution for each individual capability

Cons
▼ Maintenance: Increased reliance on internal maintenance/upgrades
▼ Governance: Complexity of interagency decision-making
▼ Change Management: Cyclical change management needed at all sites until FOC reached
▼ Execution: Higher technical and operational complexity

“One Size Fits All” Best of Suite Solution

Pros
▲ Efficiency: Enhanced system responsiveness driven by technical simplicity
▲ Speed of Implementation: Earlier achievement of full EHR capability required for current unmet needs
▲ Change Management: One time change management at each site
▲ Execution: Improved definitional clarity

Cons
▼ Vendor Lock-in: Vendor-driven solution and price
▼ Data Lock-in: Vendor-driven data solution
▼ Repeating History: Full-suite replacement in 5-10 years
▼ Not “Future-Proofed”: Inextricable capability modules
▼ Limits Compatibility: Not compatible with n-Tier (flexible) SOA architecture
▼ Limits Competitive Landscape: Creates vendor monopoly
▼ Limits Interoperability: Not compatible with successful GOTS investments which increases reliance on COTS based capabilities
▼ Data Limitations: Many BoS solutions continue to use MUMPS
▼ Configuration Complexity: Increased configuration needed for packaged COTS solution
▼ Clinician & Patient Benefit: Decreased ability to align applications with workflows and priorities
▼ Limits Innovation: COTS vendor lock-in may reduce the ability to adapt new technologies in future
▼ Increased Lead Time: Benefits are not realized until full deployment
▼ “One Size Fits All” Approach: A packaged solution will not meet all critical needs and will require additional capabilities to support mission-specific activities (i.e. immunization, theater care)
iEHR Critical Milestones: Increments 1&2 make the iEHR platform

Increment 1
- Risk Mitigation
- System Test and Evaluation
- Infrastructure & Core Services
- Data Center Regionalization
- Data Management
- SSO & CM
- GUI Pilot

Increment 2
- SOA Suite/ESB
- Identity Management
- Access Control
- Network & Security Architecture
- Information Model & Terminology Services
- iEHR GUI & Portal Framework
- Laboratory & Anatomic Pathology (SATX & HRVA)
- Immunization (SATX & HRVA)
- Pharmacy (SATX & HRVA)
The IPO developed the Integrated Acquisition Framework (IAF) to integrate DoD and VA acquisition requirements and best practices.
Capabilities will be delivered incrementally based on functional priority, technical feasibility, and financial viability.

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<td>Increment 2</td>
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**iEHR User Experience and Portal Framework**

**Infrastructure Capabilities**

**Increment 1 (2)**
- Single Sign On/Context Management (SSO-CM)*
- JANUS GUI Allergies Write-Back (Pilot)

* Denotes iEHR Infrastructure Capabilities which can span across increments

** Increment 2 (14)**
- Access Control*
- Identity Management*
- User Experience**
- 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**

** Denotes initial delivery of capability that will span across increments

** Increment 3 (13)**
- Barcoding**
- Care Management**
- Registration/Enrollment/Eligibility
- Document Management
- Emergency Department Care
- Disability Evaluation
- Consult & Referral Management
- Scheduling/Appointment
- Secure Messaging
- Radiology/Imaging
- Dental Care
- Personal Health Record
- Credentialing**

** Increment 4 (7)**
- Operating Room Management
- Alerts and Reminders
- Medical Device Management
- Anesthesia Documentation
- Mental Health
- Global Image Access
- Patient Questionnaire

** Increment 5 (7)**
- Patient Education
- Encounter Coding
- Limited IT Connectivity
- Nutrition Care
- DoD/VA Registries
- Patient Portal Infrastructure
- Patient Consent

** Increment 6 (10)**
- Disease Management
- Patient Self Report
- Teleconsultations
- Blood Management
- Private Sector Data Access
- Business Intelligence
- Patient Safety Reports
- Utilization Management
- Genomics
- XML Forms Tool*
The iEHR system architecture will require components in all layers of architecture to realize a clinical capability.
The iEHR will improve the quality of patient care per dollar spent

Key Benefits

- Improved patient safety and clinical outcomes
- Reduced waste from unnecessary tests and procedures
- Improved diagnostic accuracy
- Improved adherence to treatment and immunization guidelines
- Expanded public health protections through decreased risk of preventable infections
- Reduced administrative costs
- Increased efficiencies from improved workflows
- Improved Force Health Protection and Readiness

Current State

Future State

Separate Patient Views
- DoD and VA clinical data is not aggregated
- Disparate clinical systems

Single Patient View
- DoD and VA clinical data is aggregated
- Enterprise clinical systems
- Coordinated patient context management between applications and features
VLER HEALTH
JEC approved a “Go” decision for the incremental rollout of VLER Health capabilities

- IPO and Departments have established site selection criteria

1) High volume of potential exchanges
   - High population of shared patients
   - High volume of private sector care for Veterans and/or Service members (and eventually non-active duty beneficiaries)

2) Exchanges have high value for VA and DoD clinicians
   - Private sector HIE partner is capable of exchanging clinically relevant health information with a fully populated electronic Summary of Care document

3) Mature Private Sector Health Information Exchange Partner
   - Private sector HIE uses health information technology standards and trait matching criteria to achieve a high percentage of correlated shared patients

4) Add exchange partners at iEHR initial operating capability sites
   - Examples: San Antonio, Hampton Roads

5) Emphasize gaps to promote regional health exchange
   - Examples: Southeast, Intermountain West
### 6 Month Increments

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<th>Tidewater Pilot</th>
<th>Spokane Pilot</th>
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<td>• Insurance Provider</td>
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<td>• Inland Northwest Health System</td>
<td>• Insurance Provider</td>
<td>• History &amp; Physicals</td>
</tr>
<tr>
<td>• San Diego VA Medical Center</td>
<td>• Partners:</td>
<td>• Procedure</td>
<td>• Partners:</td>
</tr>
<tr>
<td>• Naval Medical Center San Diego</td>
<td>• 92nd Medical Group at Fairchild AFB</td>
<td>• MultiCare</td>
<td></td>
</tr>
<tr>
<td>• Kaiser Permanente in San Diego</td>
<td>• Spokane VA Medical Center</td>
<td></td>
<td>• Madigan Army Medical Center</td>
</tr>
<tr>
<td><strong>November 16, 2010</strong></td>
<td>• Inland Northwest Health System</td>
<td></td>
<td>• VA Puget Sound Health Care System</td>
</tr>
<tr>
<td>• <strong>McDonald Army Health Center (MCAHC) at Fort Eustis</strong></td>
<td></td>
<td></td>
<td>• MultiCare</td>
</tr>
<tr>
<td>• 633 Medical Group at Langley AFB</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
VLER Health Deployment Current Locations

Future Deployments tied to DoD/VA Regions, Private Sector Health Information Exchange Capabilities
VLER Health Private Sector Production Sites by Name and Location

- **Utah Health Information Network**
  - Salt Lake City, UT
  - Utah Health Information Network
- **Utah Health Information Network**
  - Utah Health Information Network
- **Charleston, SC**
  - South Carolina Health Information Exchange
- **Asheville, NC**
  - Western Carolina Health Network
- **Richmond, VA**
  - Med Virginia
- **Tidewater (VA)**
  - DoD/VA/MedVirginia
- **Asheville, NC**
  - Western Carolina Health Network
- **Charleston, SC**
  - South Carolina Health Information Exchange
- **Puget Sound, WA**
  - DoD/VA/MultiCare
- **Spokane, WA**
  - DoD/VA/Inland Northwest Health Services
- **Salt Lake City, UT**
  - Utah Health Information Network
- **Grand Junction, CO**
  - Utah Health Information Network
- **Indianapolis, IN**
  - Indiana Health Information Exchange
- **Twin Ports/Minneapolis, MN**
  - Community Health Information Collaborative
- **Buffalo, NY**
  - Western New York Healthlink
- **San Diego, CA**
  - DoD/VA/Kaiser Permanente
- **DoD/VA/Private Sector Health Information Exchange Partner**
  - 3-Way Exchange
- **VA/Private Sector Health Information Exchange Partner**
  - 2-Way Exchange

*Delivery of seamless Health Care and Benefits*
VLER Health Private Sector Pilots Implemented

Puget Sound, WA
DoD/VA/MultiCare Healthcare Services

Spokane, WA
DoD/VA/Inland Northwest Health Services

Salt Lake City, UT
Utah Health Information Network

San Diego, CA
DoD/VA/Kaiser Permanente

Twin Ports/Minneapolis, MN
Community Health Information Collaborative

Indianapolis, IN
Indiana Health Information Exchange

Grand Junction, CO
Utah Health Information Network

Buffalo, NY
Western New York Healthlink

Richmond, VA
Med Virginia

Tidewater (VA)
DoD/VA/MedVirginia

Asheville, NC
Western Carolina Health Network

Charleston, SC
South Carolina Health Information Exchange

DoD/VA/Private Sector Health Information Exchange
3-Way Exchange

VA/Private Sector Health Information Exchange
2-Way Exchange

Delivery of seamless Health Care and Benefits
VA VLHER Health Private Sector 2-Way Pilots Implemented

- VA is in production exchanging Veterans health information via the NwHIN at 8 two-way pilot locations (12 total) between VA Medical Facilities and private sector partners
  - Grand Junction, CO/Utah Health Information Network
  - Salt Lake City, UT/Utah Health Information Network
  - Charleston, SC/South Carolina Health Information Exchange
  - Buffalo, NY/Western New York Healthelink
  - Twin Ports/Minneapolis, MN/Community Health Information Collaborative
  - Indianapolis, IN/Indiana Health Information Exchange
  - Asheville, NC/Western Carolina Health Network
  - Richmond, VA/MedVirginia
Systems Infrastructure for VLER Health

Diagram showing connections between various health systems and services, including:
- Department of Veterans Affairs
- Department of Defense
- Kaiser Permanente
- MultiCare Health Systems
- MedVirginia
- Inland Northwest Health Services

The diagram illustrates the connectivity and integration of these systems through NwHIN, UDDI/CA, and other gateways, highlighting the delivery of seamless health care and benefits.
JAL FHCC
The James A. Lovell Federal Health Care Center (JALFHCC) in North Chicago, Illinois, is a one-of-a-kind facility, integrating both Department of Defense (DOD) and Department of Veterans Affairs (VA) health services for the first time in our nation's history.

The Joint health IM/IT goal for the JALFHCC Demonstration Project is to safely interface DOD and VA legacy systems to support an integrated DOD/VA facility with multiple care locations.

Active-duty service members, veterans, and their beneficiaries are able to receive care by both DOD and VA providers at the joint facility.
Established on: October 2010
Patient Population: 146,000 Beneficiaries
(Veterans, active duty, dependents, and recruits in northeastern Illinois and southeastern Wisconsin)
Hospital Beds: 400 (150 Acute Care)
Projected Annual Outpatient Medical: 900,000
Dental Visits: More than 200,000
Employees: More than 2900
- 2,185 civilians
- 728 Active-Duty military
James A. Lovell Federal Health Care Center

December 2010
- Infrastructure
  - Data Center
  - Virtualization
  - Enterprise Service Bus
- Build a Single Patient Registration process
- Create Medical Single Sign-On with Patient Context Management

Fiscal Year 2011
- Single Order Entry process for Laboratory

Fiscal Year 2011
- Single Order Entry process for Laboratory
- Single Graphical User Interface (GUI)

Fiscal Year 2012
- Consults Management

Delivery of seamless Health Care and Benefits
“Too many wounded warriors go without the care that they need. Too many veterans don't receive the support that they've earned. It's time to change all that; it's time to give our veterans a 21st-century VA.

Under the leadership of Secretary Gates and Secretary Shinseki, the Department of Defense and the Department of Veterans Affairs have taken a first step towards creating one unified lifetime electronic health record for members of our Armed Services that will contain their administrative and medical information from the day they first enlist to the day that they are laid to rest…

…And that's why I'm asking both departments to work together to define and build a seamless system of integration with a simple goal: When a member of the Armed Forces separates from the military, he or she will no longer have to walk paperwork from a DOD duty station to a local V.A. health center. Their electronic records will transition along with them and remain with them forever.”

President Barack Obama
April 9, 2009
The established governance and oversight structure effectively facilitates joint decision-making by the Departments in support of the program.

**Interagency Program Office (IPO)**

- iEHR
- VLER Health
- Oversight Mission (JALFHCC)

**JEC Co-Chairs**

- USD P&R
- DEPSEC VA

**HEC**

- Functional/Perf Requirements
- Data Standards & Compliance
- Architectural Requirements
- Clinical/Ops Workflow
- Bus. Process Reengineering

**BEC**
The IPO supports the VA/DoD JEC goal to provide high quality health care

**VA/DoD Joint Executive Council Goal: High Quality Health Care**

“Improve the **access**, **quality**, **effectiveness**, and **efficiency** of health care for beneficiaries through collaborative activities”

<table>
<thead>
<tr>
<th>Military Health System Quadruple Aim</th>
<th>VA Strategic Plan Major Initiatives Related to Health Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Readiness</td>
<td>• Enable 21st Century benefits delivery and services</td>
</tr>
<tr>
<td>• Population health</td>
<td>• Create a VLER</td>
</tr>
<tr>
<td>• A positive <strong>patient experience</strong></td>
<td>• Improve Veterans’ mental health</td>
</tr>
<tr>
<td>of care</td>
<td>• Design a <strong>Veteran-centric health care system</strong> model to help Veterans navigate the health care delivery system and receive coordinated care</td>
</tr>
<tr>
<td>• Responsibly managing the total cost of health care</td>
<td>• Enhance the Veteran experience and <strong>access</strong> to health care</td>
</tr>
<tr>
<td>• Quadruple Aim is implemented through a series of <strong>Strategic Initiatives, such as:</strong></td>
<td>• <strong>Improve the quality</strong> of health care while reducing costs</td>
</tr>
<tr>
<td></td>
<td>• Transform the delivery of health care delivery through <strong>health informatics</strong></td>
</tr>
</tbody>
</table>

- Implement DoD/VA joint strategic plan for **mental health** to improve coordination
- Improve measurement and management of **population health**
- Implement evidence based practice to **improve quality and safety**
- Implement **Patient Centered Medical Home**
- Implement **Pay for Value Programs**
- Implement **modernized EHR** to improve outcomes and enhance interoperability
Signed on October 27, 2011, the IPO charter holistically describes the IPO’s purpose, scope, mission, authority, and reporting requirements.

- The IPO serves as the single point of accountability for the Departments in the development and implementation of
  - the integrated Electronic Health Record (iEHR) and
  - Virtual Lifetime Electronic Record (VLER) Health systems, capabilities, and initiatives with the goal of full interoperability between the DoD and VA.
  - all interagency activities related to the iEHR and VLER Health Programs - lead, oversee and manage.

- Tasks include
  - Planning
  - Programming and Budgeting
  - Contracting
  - Architecture
  - Capability Acquisition and Development
  - Data Strategy and Management
  - Infrastructure Requirements and Funding
  - Common Services
  - Implementation
  - Sustainment
  - Testing and Evaluation Planning
The iEHR will build upon previously established DoD and VA information exchanges

<table>
<thead>
<tr>
<th>Bidirectional Health Information Exchange (BHIE)</th>
<th>Federal Health Information Exchange (FHIE)</th>
<th>Live Data Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Allows DOD and VA providers to view clinical information in real time for patients who receive care in either agency health system</td>
<td>• A health information sharing project that allows the Department of Defense to share service members’ personal health information in a joint storage area also accessible by the Veterans Health Administration. This information includes demographics, any medication taken and lab results.</td>
<td>• One-way transfer of health data initiated at time of decision to transfer patient</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• From Walter Reed National Military</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Medical Center in Bethesda and Brooke AMC</td>
</tr>
</tbody>
</table>
Medical history for beneficiaries will be available to any provider seen within DoD and VA

Patient and Provider Benefits

• No more paper records; medical records will follow beneficiaries as they relocate

• Medical history for beneficiaries will be available to any provider seen within DoD and VA through the iEHR

• Availability of medical information will allow providers to be informed of the beneficiary’s health status, to include medications, allergies, etc. directly supporting patient safety

• Beneficiaries will be able to directly communicate with providers through Secure Messaging for test results, etc.
One of the first capabilities to be delivered, SSO/CM, improves patient safety and results in more time per patient for the provider.

**Single Sign-On with Smooth Roaming**
- Doctor signs-on to system during first appointment
- Session will move virtually as doctor moves rooms to provide care to the next patient, eliminating the need to sign-on multiple times
- **Saves 10 minutes/hour/doctor**

**Context Management**
- Doctor moves to the next examination room and enters patient’s name in a single application
- All clinical applications will display only information for one single patient
- **Improves Patient Safety**

**Delivery of seamless Health Care and Benefits**
Researchers will be able to study trends, securely and privately, across the large population, which can lead to new medical breakthroughs

Population Health Benefits

- Improved patient safety and health outcomes as a direct result of one source system for all medical data
- Longitudinal population health data available for trend studies will allow for identification of proactive measures that can be taken to improve health outcomes
- Overall customer satisfaction will increase as moving through DoD and VA healthcare systems will be seamless in receiving care

*Charts are from MHS Population Health Portal and have been de-identified*
### Interagency Agreements

- The two Departments agreed to:
  - a new system (joint acquisition/development)
  - align to a common data model that includes common terminology models, data exchange specifications, common standards and translation services to ensure data interoperability.
  - move to a single, common data base for health information
  - use common data centers run by the DoD Defense Information Systems Agency (DISA) (based on cost and SLAs)
  - use common measures of success and establish standard end-to-end business processes
  - a Federated Development and Test Center - establish joint presence at DoD Richmond development and test center (DTC) and Joint Integration and Test Center (JITC) Maui
  - use a federated (cloud) approach
  - Single Sign On with Context Management: with approved selection of Citrix/Carefx as the single DoD-VA joint solution to be implemented in North Chicago in the near term and included in iEHR going forward
- The DoD Defense Manpower Data Center (DMDC) will serve as the single “identity management” source for both Departments.
- DoD will acquire a common Enterprise Service Bus on behalf of both Departments and we would use a shared “Common Service Broker” approach.
- VA will lead the development of a common presentation layer for both Departments.

### Guidance

- Implement a common architecture, data and services, data centers, interface/exchange standards and presentation layer
- Implement a single joint common platform using the following sequentially ordered business rules:
  - Purchase commercially available components for joint use whenever possible and cost effective
  - Adopt applications developed by VA, DoD, or other federal agencies if a modular commercial solution is not available and currently exists inside government
  - Approve joint application development on a case by case basis, and only if a modular commercial or federally-developed solution is not available
- Implement a high-level governance structure that includes the IPO, whose Director serves as the Program Executive, and an IPO Advisory Board
- Provide iEHR customer-facing capability increments every six months
- Complete development of the 54 capabilities by SEP 2017

### Policy and Directives

- National Defense Authorization Act (NDAA), Sections 804, 805, 1635, and 2222
- NOV 15, 2010: DoD DTM 11-009: Business Capability Lifecycle (BCL) Model
- VA Program Management Accountability System (PMAS)
- VA Directives for Security (6212), Protective Health Information (PHI), Privacy (6600, 6507), and Section 508
- Health Insurance Portability and Accountability Act (HIPAA)
- Secretary-directed Interoperability Objectives, i.e., Federal Health Information Exchange (FHIE); Bidirectional Health Information Exchange (BHIE)
- Open Source (Custodial Agent)
- Governance
  - Interagency Program Office (IPO) Charter (OCT 27, 2011)
  - VA/DoD Joint Executive Council (JEC) and VA/DoD Health Executive Council (HEC)
  - DoD/VA Interagency Clinical Informatics Board (ICIB)
  - Health Architecture Review Board (HARB)
**Increment One Major Milestones**

**DoD/VA iEHR Increment 1 Major Milestones**

<table>
<thead>
<tr>
<th>Program Milestones &amp; Engineering</th>
<th>AVHE/SSO/CM</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/29/2012 iEHR Architecture &amp; Design Review</td>
<td>5/14/2012 JANUS GUI w/ CM (DoD)</td>
</tr>
<tr>
<td>10/12/2012 Inc 1, CDR</td>
<td>7/30/12 DTC AVHE/SSO-CM Installation Complete</td>
</tr>
<tr>
<td>9/19/2012 SSO-CM</td>
<td>10/4/2012 SATX Installation Complete</td>
</tr>
<tr>
<td>Garrison 1.4 SIT</td>
<td>11/9/2012 SATX UAT, Power User Training &amp; Testing Complete</td>
</tr>
<tr>
<td>8/29/2012 Milestone B1, (incr 1)</td>
<td>12/27/2012 Portsmouth Installation Complete</td>
</tr>
<tr>
<td>10/12/2012 Milestone C, (incr 1)</td>
<td>2/26/2013 Tripler Installation Complete</td>
</tr>
<tr>
<td>12/19/2012 Milestone C, (incr 1)</td>
<td>3/27/2013 Landschul Installation Complete</td>
</tr>
<tr>
<td>5/31/2013 Full Deployment Decision (FDD)</td>
<td>5/31/2013 Additional Site Deployments Begin</td>
</tr>
</tbody>
</table>

**Janus Pilot**

<table>
<thead>
<tr>
<th>4/9/2012 JANUS GUI w/ CM (VA)</th>
<th>7/14/2012 Release 2.1 CDR</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/14/2012 Kickoff</td>
<td>9/14/12 - 12/31/12: HDD Mapping</td>
</tr>
<tr>
<td>9/12/2012 Release RFP / SLC Mapping</td>
<td>9/14/2012 Release 2.1 Dev Complete</td>
</tr>
<tr>
<td>9/12/2012 Contract Award</td>
<td>1/11/2013 Release 2.1 Dev Complete</td>
</tr>
<tr>
<td>5/23/2012 HDD License Agreement Terms</td>
<td>2/11/2013 Release 2.1 Go-Live</td>
</tr>
<tr>
<td>4/15/2012 Wave 1 Configuration Complete</td>
<td>2/25/2013 Release 2.2 CDR</td>
</tr>
<tr>
<td>5/7/2012 IATO#4 granted</td>
<td>7/26/2013 Release 2.2 Dev Complete</td>
</tr>
</tbody>
</table>

**Legacy Data Mapping**

<table>
<thead>
<tr>
<th>5/23/2012 Contract Award</th>
<th>7/22/2012 Terminology Mgmt TO Row</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/15/2012 Receive signed ATO</td>
<td>2/15/2013 Release RFP / VisA Mapping</td>
</tr>
<tr>
<td>4/29/2012 Development Infrastructure Available</td>
<td>1/6/2013 Testing Infrastructure Available</td>
</tr>
<tr>
<td>7/15/2012 Contract Award H/W SMES</td>
<td>8/30/2012 Operational Test Plan</td>
</tr>
<tr>
<td>7/18/2012 Draft TEMP Annex Input</td>
<td>12/26/2012 Configuration Complete</td>
</tr>
<tr>
<td>10/20/2012 OMAR</td>
<td>10/25/2013 DGER</td>
</tr>
<tr>
<td>3/15/2012 - 3/15/2014</td>
<td>11/26/2012 Configuration Complete</td>
</tr>
</tbody>
</table>

**DTC Integration**

<table>
<thead>
<tr>
<th>10/18/2011 MOUSLA Developed</th>
<th>11/14/2011 DISA Approved LOE (DoD) Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/28/2012 Development Infrastructure Available</td>
<td>11/19/2012 Receive signed ATO</td>
</tr>
<tr>
<td>6/19/2012 T&amp;E Concept Brief</td>
<td>7/19/2012 Draft TEMP Annex Input</td>
</tr>
<tr>
<td>7/18/2012 T&amp;E Concept Brief</td>
<td>8/30/2012 Operational Test Plan</td>
</tr>
<tr>
<td>10/19/2012 OMAR</td>
<td>10/25/2013 DGER</td>
</tr>
<tr>
<td>3/15/2012 - 3/15/2014</td>
<td>11/26/2012 Configuration Complete</td>
</tr>
</tbody>
</table>

**Data Center Regionalization**

<table>
<thead>
<tr>
<th>10/16/2012 Conduct Beta Pilot</th>
<th>3/15/2013 Decision to Extend Consolidation</th>
</tr>
</thead>
</table>

**Evaluate performance implications for legacy systems and inform transition strategy**
### Increment Two Major Milestones

#### DoD/VA iEHR Increment 2 Major Milestones

<table>
<thead>
<tr>
<th>Program Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/23/2012 Milestone A (incr 2)</td>
</tr>
<tr>
<td>1/31/2013 Milestone B (incr 2)</td>
</tr>
<tr>
<td>1/31/2014 Milestone C (incr 2)</td>
</tr>
</tbody>
</table>

#### SOA Suite

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/26/2012</td>
<td>Government Sandbox (a/ITC) Completed</td>
</tr>
<tr>
<td>11/2/2012</td>
<td>SOA Suite Design Review</td>
</tr>
<tr>
<td>3/31/2013</td>
<td>PK 0 Complete</td>
</tr>
<tr>
<td>7/31/2013</td>
<td>PK 1 Complete</td>
</tr>
<tr>
<td>11/30/2013</td>
<td>PK 2 Complete</td>
</tr>
<tr>
<td>1/31/2014</td>
<td>PK 3 Complete</td>
</tr>
<tr>
<td>4/30/2014</td>
<td>PK 4 Complete</td>
</tr>
<tr>
<td>6/30/2014</td>
<td>PK 5 Complete</td>
</tr>
<tr>
<td>9/30/2014</td>
<td>PK 6/7 Complete</td>
</tr>
</tbody>
</table>

#### Pharmacy

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/23/2012</td>
<td>Pharmacy PM M/d</td>
</tr>
<tr>
<td>4/6/2012</td>
<td>Initial RFI Released</td>
</tr>
<tr>
<td>5/31/2012</td>
<td>RFI Draft Complete</td>
</tr>
<tr>
<td>7/12/2012</td>
<td>RFP Draft PWS Released</td>
</tr>
<tr>
<td>11/29/2012</td>
<td>PMAS MS 0 Doc complete</td>
</tr>
<tr>
<td>3/1/2013</td>
<td>PMAS MS 1 Doc Complete</td>
</tr>
</tbody>
</table>

#### Laboratory

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/1/2012</td>
<td>GIPT Approved</td>
</tr>
<tr>
<td>4/15/2012</td>
<td>Lab Requirements approved: Kickoff</td>
</tr>
<tr>
<td>6/13/2012</td>
<td>Lab RFI Released</td>
</tr>
<tr>
<td>10/17/2012</td>
<td>Lab IDRD</td>
</tr>
<tr>
<td>23/1/2013</td>
<td>Lab Contract Award</td>
</tr>
<tr>
<td>9/11/2013</td>
<td>Immunization SW Delivery 1 complete</td>
</tr>
<tr>
<td>3/21/2014</td>
<td>Immunization SW Delivery 2 complete</td>
</tr>
</tbody>
</table>

#### Immunization

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/28/2011</td>
<td>JIC Market Research Complete</td>
</tr>
<tr>
<td>6/18/2012</td>
<td>BRD Approved</td>
</tr>
<tr>
<td>8/8/2012</td>
<td>RFI Rvw Complete</td>
</tr>
<tr>
<td>9/17/2012</td>
<td>PMAS Docs Complete</td>
</tr>
<tr>
<td>10/17/2012</td>
<td>PMAS Docs Complete</td>
</tr>
<tr>
<td>1/3/2012</td>
<td>IHR Immunization SW Delivery 1 complete</td>
</tr>
<tr>
<td>9/30/2013</td>
<td>Tech Solution Dev Complete</td>
</tr>
<tr>
<td>7/9/2014</td>
<td>Complete Systems Integration Testing</td>
</tr>
</tbody>
</table>

#### Access Management

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/13/2012</td>
<td>BRD v 1 Complete</td>
</tr>
<tr>
<td>1/23/2013</td>
<td>ED/EDN Correlation SW: Complete</td>
</tr>
<tr>
<td>1/30/2013</td>
<td>Requirements Traceability Matrix</td>
</tr>
<tr>
<td>2/24/2014</td>
<td>User Acceptance testing at DTG/DTZ Complete</td>
</tr>
<tr>
<td>3/29/2014</td>
<td>IOC UAT &amp; Tng Complete</td>
</tr>
<tr>
<td>8/29/2014</td>
<td>Go Live</td>
</tr>
</tbody>
</table>

#### Identity Management

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/28/2012</td>
<td>User Acceptance Testing for BRD v 1</td>
</tr>
<tr>
<td>3/12/2013</td>
<td>Unified Search Algorithm Alignment</td>
</tr>
<tr>
<td>12/2/2013</td>
<td>Enhanced User Reg Path Management</td>
</tr>
<tr>
<td>4/30/2013</td>
<td>Contract Award - Portal Infrastructure</td>
</tr>
<tr>
<td>11/9/2013</td>
<td>Clinical Doc Write Back Phase 1 Released</td>
</tr>
<tr>
<td>2/20/2013</td>
<td>CIPOE Released</td>
</tr>
</tbody>
</table>

#### Presentation Layer

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/5/2012</td>
<td>Complete Open Source Lifecycle Performance/Scalability Testing</td>
</tr>
<tr>
<td>12/12/2012</td>
<td>Data Mapping Complete</td>
</tr>
<tr>
<td>2/28/2013</td>
<td>Release RFP - UX/UI Infrastructure</td>
</tr>
<tr>
<td>3/4/2013</td>
<td>Portal Infrastructure Implemented at 1st Release 0.0.0</td>
</tr>
<tr>
<td>7/26/2013</td>
<td>Real City Portal Released</td>
</tr>
<tr>
<td>10/11/2013</td>
<td>Clinical Doc Write Back - Clinical Decision Support Released</td>
</tr>
<tr>
<td>4/17/2014</td>
<td>Clinical Decision Support Released</td>
</tr>
</tbody>
</table>
## iEHR Increment 2 Critical Path

### Requirements:
- Requirements are not complete. Increment 2 is forcing evolution of these packages and data exists to move forward.
- Process and documents have matured to mitigate potential future issues.

### Program Milestones:
- **Q1**: 4/18 ADM
- **Q4**: 7/31

### Design:
- Guidance on SOA Architecture needed to inform Project Design.

### Acquisition
- SOA Contracting delays. Waiver for transfer of funds granted. Program waiver still needed.
- Design delays, and Contracting Office decision delays are delaying RFPs and Contract Awards.
- Need to define the process for Departmental reviews of RFPs.

### Configuration/Development and Testing
- SOA/ESB Contractor Sandbox 4/19
- SOA/ESB Gov. Sandbox 6/20

### Capability Deliveries
- JANUS Third Site deployment pulled resources from the Increment 1 JANUS Allergy Write-Back pilot.

### Legend:
- **Planned Date**
- Critical Path Date
- Completion Date
- Date changes with impacts

### Key Dates:
- **7/27**: Initial Planning and Review
- **12/4**: BJ Orders Services
- **3/9**: BJ Clinical Decision Support
- **10/17**: BJ Identity Management
- **11/14**: BJ Pharmacy
- **11/28**: JANUS Third Site Deployment
- **6/14**: Pharmacy Award
- **6/14**: Lab Award
- **6/14**: Immunization Award
- **6/14**: PL Award
- **March 2013**: Begin INC 2 Capability Development/Configuration/and Testing
- **June 2013**: Finalize INC 2 Capability Development/Configuration/and Testing

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**Delivery of seamless Health Care and Benefits**
The Agile Manifesto

We have come to value...

<table>
<thead>
<tr>
<th>Agile</th>
<th>over</th>
<th>Waterfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals and Interactions</td>
<td>over</td>
<td>Processes and Tools</td>
</tr>
<tr>
<td>Working Software</td>
<td>over</td>
<td>Comprehensive Documentation</td>
</tr>
<tr>
<td>Customer Collaboration</td>
<td>over</td>
<td>Contract Negotiation</td>
</tr>
<tr>
<td>Responding to Change</td>
<td>over</td>
<td>Following a Plan</td>
</tr>
</tbody>
</table>

That is, while there is value in the items on the right, we value the items on the left more.
Traditional vs. Agile Delivery

Waterfall and Agile projects take fundamentally different approaches in completing requirements, design, development and testing activities.

**Traditional Waterfall Delivery**

<table>
<thead>
<tr>
<th>Week 1-4</th>
<th>Week 5-8</th>
<th>Week 9-12</th>
<th>Week 13-16</th>
<th>Week 17-20</th>
<th>Week 21-24</th>
<th>Week 25-28</th>
<th>Week 29-32</th>
<th>Week 33-36</th>
<th>Week 37-40</th>
<th>Week 41-44</th>
<th>Week 45-48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements</td>
<td>Design</td>
<td>Develop</td>
<td>Test</td>
<td>Deploy Product</td>
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<td></td>
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</tr>
</tbody>
</table>

**Agile Delivery**

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development Sprint 1</td>
<td>Development Sprint 2</td>
<td>Development Sprint 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Delivery of seamless Health Care and Benefits

Source: Adapted from Scrum Methodology and Deloitte Framework
Agile Program Management
Agile Scrum Clinical Governance

Health Executive Council (HEC)

ICIB (ICIB) Co-Chairs

DOD/VA Business Sponsors

Integration with other SMEs (e.g. technical, data)

DoD & VA Capability Business Owners

Product Owner

Integration with other SMEs (e.g. technical, data)

Delivery of seamless Health Care and Benefits