



# J P Systems, Inc.

## VHIE Case Studies



### **Direct Secure Messaging Support for Federal Enterprise HealthCare Client**

In 2016, Veterans' Health Administration (VHA) sought a contractor to support the VLER Health program in developing health information exchange (HIE) software processes, content, and business and systems architecture. They needed a contractor to conduct and coordinate terminology standards activities, which included analyzing knowledge management and creating and managing healthcare terminologies. They needed a contractor who could also develop and maintain terminology standards within the VLER Health Business & System Architecture, including FHIR, Security Labeling Service (SLS), and Direct protocol.

J P Systems used prior expertise in clinical Knowledge Based Systems, terminology standards, interoperability, and HIEs to fulfill VHA's needs. Alongside internal VA groups and external partners, we transformed and defined VLER Health's terminology standards and business objectives into goals and milestones for VA's Integrated Project Team (IPT). We did this by analyzing the SCRUM framework's business architecture and focusing on four areas: C-CDA expansion, Electronic Health Exchange (eHX) architecture enhancement, direct integration with end user applications, and tool integration.

We also helped develop VLER Health's Business and System Architecture by analyzing its current state: architecture business capability, service capability, capability maturity, targets, and gaps associated with the VHIE program strategy and investment planning. We also made recommendations for the future, suggesting optimal workflows associated with HIE Business & Systems Architecture and defining As-Is & To-Be End-to-End Data Flow Architecture.

As we have multiple option years, we continue to work with VLER Health to optimize their Business & System Architecture through planning future state architectures and middleware evaluations for interoperability planning purposes. The VA has recently just been accepted into the Direct Trust's ATAB bundle.



Direct is a Health Information Service Provider (HISP) and organizational model that allows individuals, providers, and organizations to share information with best practices that have trust and privacy considerations.

Direct has Legal Business Associate Agreements with HIPAA and follows data collection, use, retention, and disclosure policies.

## Data Quality Improvement & Data Standards Expansion, Part 1

VHA Office of Informatics and Analytics (OIA) Knowledge Based Systems (KBS) sought to improve the quality of the data that flows between their systems, its commercial partners, and other government agencies. They needed a contractor to analyze their data flow, make recommendations on C-CDA and other standard clinical document formats, and establish interoperability performance metrics for data improvement. They also needed a contractor who could engage healthcare data standards bodies and other federal agencies to improve and clarify standards.

J P Systems provided non-personal Data Quality Management services to enable the VLER Health program (a.k.a. VHIE) to improve and expand VA's ability and securely share computable electronic health information with other healthcare providers that care for veterans. We tracked the flow of health data generated by VA and its commercial partners, analyzing the data, identifying errors, planning how to fix data quality errors, and making recommendations for improving the systems that move and display the data. We analyzed technical and functional requirements and provides guidance on C-CDA Expansion.

We accomplished more than the customer anticipated in virtually every area, and we were rewarded with a new task order for continuing work on this effort.



Through our DQ Doctor website, [www.dqdoc.com](http://www.dqdoc.com), we offer potential clients demo sessions on our terminology and data quality/fidelity services.

## Data Quality Improvement & Data Standards Expansion, Part 2

Based on previous work and client satisfaction, VHA OIA KBS issued us a sizable follow-on task order to TO 06 to continue improving and managing the quality of data that is sent and delivered through Electronic Health Records (EHRs) and Health Information Exchanges (HIEs). They also needed to be able to export up-to-date CCD files, as they were only able to export C32 files.

J P Systems continued to outperform client expectations, engage external partners and track performance metrics. Plus, we began to directly engage the EHR vendors involved in correcting problems with CDA file exportation earlier in the data exchange and transmission cycle. We monitored data flow to identify errors and find ways to fix them, and we presented recommendations to VHA and their external partners on how to improve. We also implemented the ability to export the new version of CCD health standards specification, C-CDA, for the VA. Thus VHA's program, MyHealthVet, can now empower over three million veterans and their providers to access their clinical data worldwide. To continue improving standards and performance, we corresponded with federal regulatory bodies, allowing us to develop a nationally standardized Testing Plan that could test and enhance implementation of C-CDAs in order to accelerate external Partner Onboarding for clinical data exchange.

In 2018, another follow-on task, TO 25, was issued by VHA OIA KBS to continue this work of monitoring data quality, engagement, and onboarding more external partners for data exchange. To date, we have helped over 205 major hospital chains be on-ramped into VHIE.

