J P Systems, Inc.
VADP (Lighthouse) Program Case Study

Terminology Support for Federal HealthCare Client

The VA API Development Portal, VADP, formerly known as Lighthouse, is a Veterans Health Administration (VHA) program which provides clinical data via Application Program Interfaces (APIs) to support a variety of healthcare needs. The first client of the program was **Apple Health**, which supports Veterans with health data at their fingertips. The program asked the VHA Knowledge Based Systems Division (KBS) to provide terminology mappings for coded elements. They wanted to create FHIR APIs to access VistA, but needed our expertise to translate the VistA coded clinical data to meet the requirements of the HL7 FHIR specification. For example, the HL7 FHIR standard requires an allergy status code for patients, but VistA does not have such a status. We created a software rule which calculates an allergy status (active, inactive, resolved etc.) based on other information in the patient's record. Our expertise in both the details of FHIR standards compliance and clinical data enabled us to bridge the understanding gap and complete the project.

J P Systems' technical SMEs worked with the KBS Lighthouse Project team to provide terminology support and guide the FHIR interface development. J P Systems performed clinical and statistical analysis on VA clinical data, informed by data specifications, to assess how well the data correspond to the standard. In cases where the correspondence is clinically valid, we provided mappings. In cases where the correspondence was inexact, we worked with the business owners to understand their priorities for the data and make recommendations to fit the case. For example, some of the "medication order status" values fit perfectly; others didn't. Where they didn't, we had to identify lossy maps, ensure they would be used appropriately, and provide extensions to the standard for cases that required the full original semantics.

What does the VHA VADP program do?

VADP pulls VistA data in order to support FHIR standard resources, such as the Argonaut data query. These resources are intended to be used anywhere by any consumer and would have a variety of uses. The first use is as a patient-facing application that allows Veterans to view their VA health data with their external health data.

For more information on FHIR and other projects we've worked on, go to https://jpsys.com/government

Because of our work on this project, Veterans can now view their VA healthcare data on their phones alongside their data from other healthcare provider organizations. By meeting FHIR standardization requirements, we have also laid the foundation for operational communication of data across healthcare organizations. These communications include (but are not limited to) consultations, referrals, and support for Veterans who move.

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