FY24 VA-DoD Joint Incentive Fund Proposal

Veteran-controlled Health Data Pods: Enabling Cloud-based Continuity of Care in the Community

Rafael Richards MD MS FAMIA | Physician Informaticist
Office of Health Informatics |Veterans Health Administration
202-469-1527 | rafael.richards@va.gov
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Executive Summary

VA has nearly 9 million veterans under its direct care, and an increasing percentage is provided through Community Care. This pilot demonstrate how VA can deploy and manage a fleet of cloud-based patient-controlled personal health data hubs using the Solid web standard[1] to enable veteran control of their own health data and improve care coordination across the VA, DoD, and Community Care systems.

Background and Previous Work

Today patient data is stored in thousands of different electronic health record (EHR) systems across the United States. Access to one's health record is controlled by each EHR vendor within their specific database. Every EHR vendor has its own unique subset of one's health data and its own processes and applications to access to this. This fragmentation of health data results in breakdown of care coordination, and is the most challenging for veterans receiving Community Care, where are thousands of unique EHRs[2].

Solid is emerging web standard to store, manage, update, and share personally controlled data securely on the web independent of any vendor or technology. Solid would allow veterans to control their own health data in their own personally controlled, secure, Solid-based "Health Data Pod". Veterans can access, create, update, and amend their own Health Data Pod at any time. Veterans can also delegate authority to access, update, or share their Health Data Pod to relatives and third parties. Health Data Pods addresses the problem of patients not knowing or remembering all the entities that are storing and using their health data and puts it in the veterans in control of their health information.

Several national governments are piloting Solid to enable personal control and management of their citizens most personal data. Belgium is deploying Solid data hubs for all 6.5 million citizens so they may control their own data, identity, health, and services. The Swedish government is in the process of rolling out Solid nationwide. The National Health System (NHS) in the UK is piloting Solid hubs for a cohort of over a million patients. Solid is fully compatible storing health information in the FHIR[3] format. The NHS synchronizes FHIR data to Solid as their provisioning strategy. Solid provisioning has been tested up to 30 million hubs and is limited only to the cloud hosting infrastructure.

Outcome

The Solid-based Veteran Health Data Pods will improve quality, access, and coordination to care as the veterans health data moves with the veteran wherever they receive care.

Implementation, Cost, and Schedule

The Veteran Health Data Pods will be implemented in the VA Enterprise Cloud, a federally certified HIPAA-compliant commercial cloud. This provides rapid implementation in the most secure, scalable hosting environment available to VA. An initial fleet of up to 500,000 Solid Hubs will be provisioned via export of FHIR data, and offered to all veterans via multi-channel, web-based enrollment. Continuous evaluation of the use of Health Data Hubs by veterans by human factors engineering and usability experts will feed back into the user interface and user experience design. Estimated cost for one-year pilot will be $1 million.

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[1] https://solidproject.org

[2] There are over 11,000 unique electronic health records systems in use in the United States. The complete list of certified Health IT products is listed at https://chpl.healthit.gov/

[3] https://www.w3.org/2019/Talks/1209-swat4ls-egp/