

# PseudoVet

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# Introduction to PseudoVet

- **Describe the innovation- what does it do? What is it?** PseudoVet is an automated patient data fabrication engine used by software developers at the VA. It provides a set of active synthetic patients and clinical data that can be used for healthcare software development. Development against real patient data unnecessarily exposes patient health information (PHI) and personally identifiable information (PII) and cannot be used by developers outside of the VA network.
- **Why is this innovation necessary?** VHA Innovation has always utilized synthetic data provided by VA Electronic Health University (VeHU), in the Future Technologies Laboratory. The data is static and does not allow for real time or real world scenarios to occur over time for any modality. Furthermore, it is often the case that Developers will develop a handful of patients for the specific problems they have been contracted to solve. In this regard, there is no sure way to evaluate the validity and accuracy of the data as they are hand tooled by the Contractors to work with their systems.
- **What problem is the innovation trying to solve?** Fully functional, realistic data sets can be used safely in development, testing, training and other non-production environments in compliance with the Health Information Technology for Economic and Clinical Health Act (HITECH Act) and other regulations

# PseudoVet - The Beginning

- **How did this innovation come to be?** PseudoVet is a FTL lab product. The concept has been discussed since 2014. As of August, FY17, PseudoVet was awarded through the NASA IDIQ and is now kicking off a 4 part competition to bring the product into fruition within 6-9 months.
- **Was it an industry project in partnership with VACI?** It's a FTL product paid for by VACI and managed by VHA Innovation and FTL.
- **Who is/was part of the team?** VHA Innovation, VACI, FTL, VHA Clinical SMEs, TopCoder, HeroX and Operation Code.
- **Who is the target audience?** Corporate Data Warehouse (CDW); VHA Innovation, VACI, Innovator's Network, external and internal developers.

# PseudoVet The Products

- **Screenshots or live link to the product:** Currently there are no screen shots or links to the product as it was just awarded. We are in the throes of planning our official Kickoff meeting.
- **Walk through the product and explain it as a use case from a veteran-centric perspective:** The PseudoVet is part of a 4 part competition series. Nasa has provided the contract vehicle, while Harvard has helped VHA build the competition requirements into a formidable approach.
  - **PseudoVet Competition Part 1:** Contractors generate synthetic patient data and consolidate the data into a reference database.
  - **PseudoVet Competition Part 2:** Contractors develop a collection of restful web-services that generate Synthetic Patient and Clinical Data using only open source technologies and output JSON format.
  - **PseudoVet Competition Part 3:** Contractors build the AI, synthetic data engine that is PseudoVet.
  - **PseudoVet Competition Part 4:** Contractors develop a mechanism to put this data on a continuous basis into Vista systems for use by developers on an ongoing basis.
- **Explain how informatics applies to the product and it's value:** The VA is developing PseudoVet 1.0, a publicly available, automated patient data fabrication engine that provides a set of active synthetic patients for healthcare software development and application testing. The system shall create and update synthetic patient data using a set of templates for various diagnoses would provide more relevant patient data for development that could be used both inside and outside of the VA network.

# PseudoVet - The End State

- What is the end goal, long-term (define a timeline for “long-term”)? While FTL plans to offer this service, free of charge, PseudoVet needs a definitive home and business owner. Furthermore, the interface will need to be fleshed out to include all morbidities and co-morbidities that a Veteran might endure in a life time. We plan to bring CDW into the fold, once we finish the Proof-of-concept, as a potential business owner.
- What was the lifecycle of the innovation and where is it in that lifecycle now? PseudoVet is in the feasibility phase, whereby we are building the synthetic patient data engine for the first time. It’s lifespan could be indefinite as long as it is designed and developed to be clinically relevant, using open source code, in order to stay malleable and fresh as technology changes.
- What is next? We build PseudoVet 1.0 through the NASA competition contract vehicle.
- What do you need to make the end goal happen? The only thing missing is we can never have enough clinical SMEs. The most difficult part of this for the coders is “knowing” the clinical impact and reasoning of attaching any morbidities to a synthetic patient. It has to be clinically relevant!