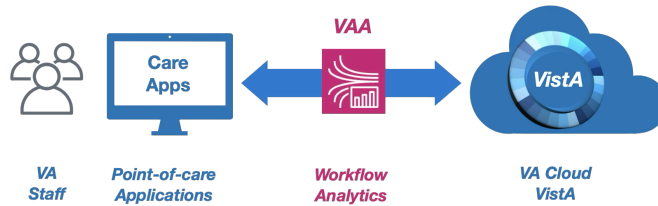


## Comprehensive Cloud-based Analysis of VA Clinical Workflow



**Summary:** The VistA Application Analytics (VAA) project provides the first-ever analysis of the **actual workflows of all staff of entire VA medical centers**. VAA captures all traffic generated by all VistA point-of-care applications within a VA medical center [1]. From this traffic, VAA determines all users, usage and clinical workflows of the medical center. This fully-automated center-wide approach avoids the narrow scope of manual over-the-shoulder observation of a small set of clinicians, and replaces this with a fully-automated, data-driven, deterministic approach that analyzes the complete, actual clinical workflow of entire VA medical centers. Benefits of VAA include:

### Improving VA Care Efficiency and Access to Care

The primary point-of-care application used at all VA medical centers is the Computerized Patient Record System (CPRS). Each day 350,000 VA staff use CPRS to process over 50 million documents, orders, labs, alerts, and transactions. Annually CPRS supports over 115 million veteran care encounters. At this scale, saving just one minute per veteran care encounter using VAA translates to 2 million hours of additional clinician time - increasing efficiency and access of care to veterans nationwide.

### Accelerating EHR Modernization while Maintaining Efficiency and Veteran-Centric Care

VA's current clinical applications and their workflows incorporate 30+ years of institutional knowledge, congressional mandates, and specialized care unique to the VA and Veterans. In addition, each of the 170 VA medical centers perform different clinical workflows, each with different frequencies. Surveys at VA medical centers after migration to the new EHR show a persistent 30% loss in clinical efficiency due to workflow inefficiencies and workarounds. VAA profiles and reduces the clinical workflows of a VA medical center to a set of configurations for the new EHR. VAA preserves VA medical center specific workflows - and enables these workflows to be migrated to the new EHR - preserving veteran-centric care and minimizing efficiency loss.

**Current State:** VAA is currently analyzing the clinical workflows from two representative VA medical centers to prompt [a] improved clinical efficiency, including for community care and [b] aid migration of existing workflows to the new federal EHR, minimizing loss of efficiency and preserving veteran care specifics.

[1] VistA client traffic is captured using the AWS traffic mirroring capability built-in to all VA Enterprise Cloud (VAEC) VistA systems. This traffic mirroring configuration of VAEC VistA is called VistA Adaptive Maintenance (VAM).