

Community Care systems

Technical Discovery

In 2014, VA spent about \$7.9 billion on community care—about 12% of VHA's budget. By 2021, that number had risen to \$17.6 billion and accounted for 20% of VHA's budget.

A number of different systems support Community Care [throughout the process of getting and providing care](#).

Objective

Our overall objective is to get a baseline understanding of the systems involved in community care.

Methods

We used several methods to conduct this technical discovery:

- Internet searches for publicly available information, user guides, and code. This represented the bulk of how we built the technical landscape
- Conversations:
 - One meeting with the Community Care Eligibility API team to determine the connections and decisions around the API
 - One short general technology landscape meeting with Community Care technology specialists and leaders

Technical landscape

This section is organized by 'event': eligibility, referrals, appointments, records, prescriptions, billing and messaging and communications.

Resources

- [VA Enterprise Roadmap \(VA/Office of Information and Technology\)](#)

Eligibility

Enrollment System API

Using a Veteran Integration Control Number (ICN), this API returns the Veteran's residential address and eligibility: ('U', 'Urgent care'), ('G', 'Grandfathered'), ('H', 'Hardship'), ('N', no full service VHA facility)

Community Care Eligibility API

This is one of the VA's Lighthouse APIs. The Community Care Eligibility API uses the Enrollment System API.

More details about the API

- Who uses the API?
 - The VAOS team
- Does the Decision Support Tool use the Community Care Eligibility API?
 - It does not
- Why does the API not do eligibility calculations based on appointment wait times?
 - This is complicated based on when you do the wait time calculation
- What's the roadmap for the API? Are there any features that are going to be developed?
 - There is no future roadmap
- Knowing nothing about quality standards, why is that considered subjective?
 - Both quality standards require human interpretation because there is no data source that could help

Resources

- [Developer documentation](#)
- [GitHub code repository](#)
- [Sequence diagram that represents how the API works](#)

Limitations

- The last two eligibility criteria, best medical interest and quality standards, are subjective criteria outside the scope of this API
- Additionally, the API does not look at appointment wait times
 - While [wait times are available online](#) (and through an [API](#)) the wait time calculation depends on the time of setting the appointment. It's also been raised that the wait time data might not be easily accessible.

Future discovery

- Is it possible for the community care eligibility API to be expanded to support wait times and quality standards?

Decision Support Tool

The Decision Support Tool one to quickly review the criteria in the [VA MISSION Act of 2018](#) to determine if a Veteran is eligible and would be best served using Community Care. It also documents the decision in the Veteran's health record.

This is part of the Computerized Patient Record System (CPRS) consult order workflow (and is accessed through CPRS). Users must have the Consult Toolbox enabled.

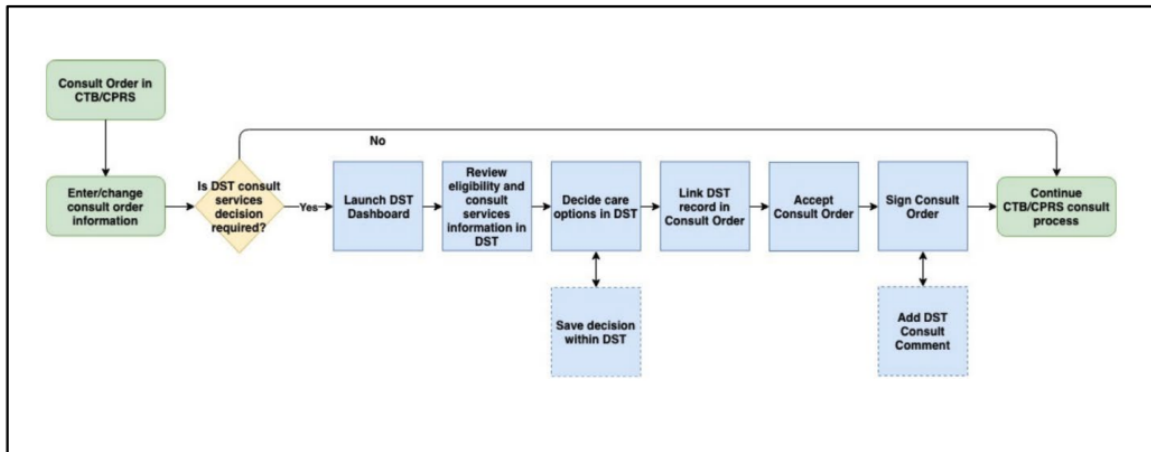


Figure: Decision Support Tool business process workflow for the unsigned order consult.

Consult: PHYSICAL THERAPY

Name: [REDACTED] Residential Address: [REDACTED] Date of Birth: Jul 31, 1967 (52) SSN: ***-**-0317

☒ Urgent Care Eligible

Clinical Service (Specialty Care): X

Urgency: Routine

Drive Time Std: 60 min Wait Time Std: 28 days CID/No Earlier Than Date: 05/07/2020

VA Facilities: Physical Therapy

VHA facilities that MAY provide clinical services related to this consult are listed below.

| Facility Name | Average Drive Time | VA Average Wait Time | CC Average Wait Time |
|----------------------------------|--------------------|----------------------|----------------------|
| Waynesville, MO MS CBOC (589GF) | 59 min (58.2 mi) | 19 days | Date not available |
| Columbia, MO VAMC (589A4) | 73 min (76.2 mi) | 14 days | 5 days |
| Mount Vernon, MO MS CBOC (564BY) | 113 min (120.4 mi) | 15 days | Date not available |
| Washington, MO PC CBOC (657GS) | 133 min (122.5 mi) | 21 days | Date not available |

* Facilities in gray will not affect the Veteran's drive time eligibility.

Community Care

Community Care Eligible based on

☒ **Best Medical Interest of Veteran**

Difficulty in traveling:

To be considered if a Veteran has significant difficulties traveling to a VA facility even if the estimated average drive time is less than the drive time standard (30 mins for PC and MH and 60 mins for SC) and doing so would result in

Explanation (required) 28 / 200

Veteran Community Care Option (required)

☐ TBD/Deferred ☒ Opt-in for CC ☐ Opt-out of CC

Standardized Episode of Care (required)

[View SEDC](#)

Forward to Community Care?

Consult forwarding is not available for the selected Standardized Episode of Care

Figure: Provider Decision Support Tool dashboard screen

Technical

- Developed by Cerner Federal Solutions (dba AbleVets)

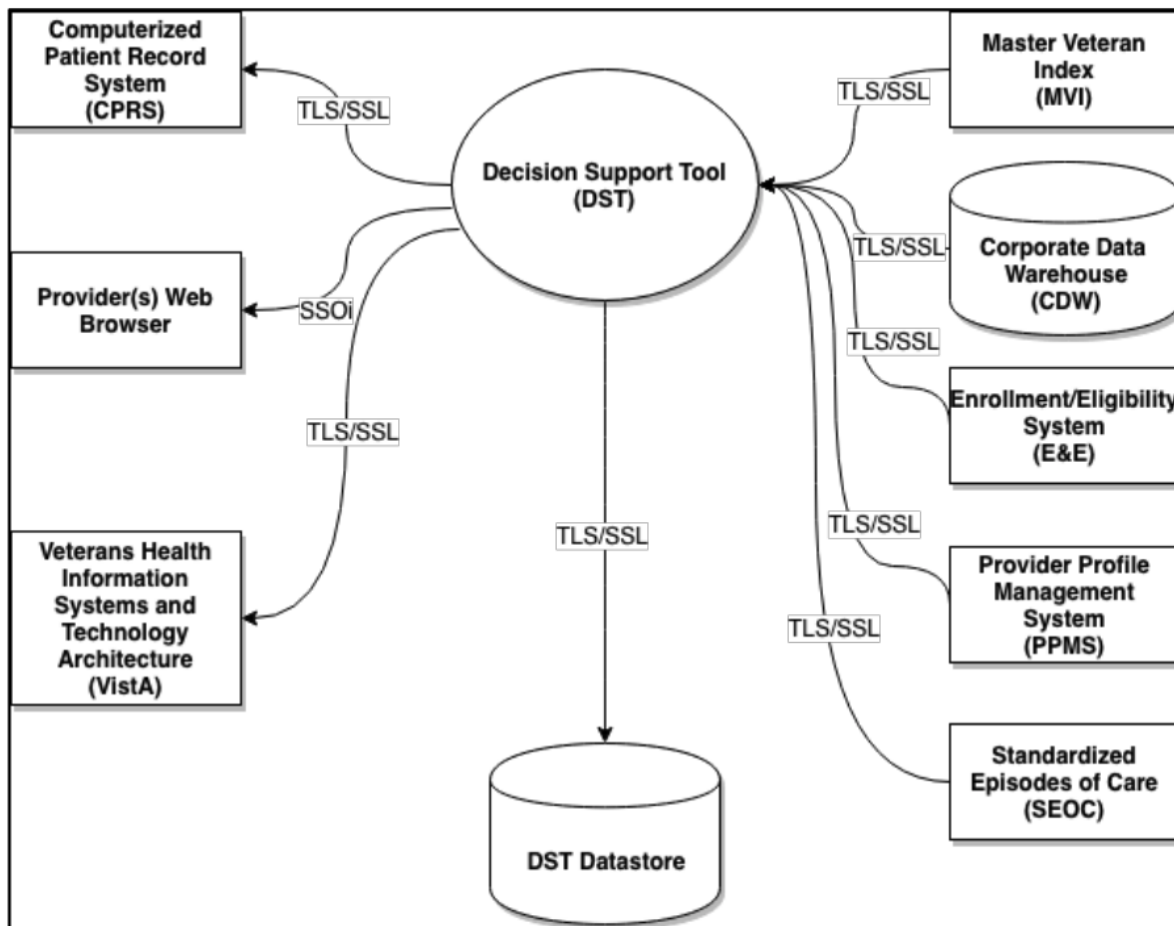


Figure: Decision Support Tool data flow diagram

Resources

- [Decision Support Tool user guide](#)

VistA Computerized Patient Record System (CPRS)

Clinicians using the CPRS sometimes need to create a consult for services outside of the VA facility. The consult order workflow helps the Veteran and VA provider decide if a consult service should be referred to a VA facility or a community provider.

Consult Toolbox

Manage the process of consult management.

Consult Toolbox

What's New **Help**

| | | | |
|---|--|---|--|
| Veteran Name DSTSEVEN, CHYSHRSEVEN Date of Birth Mar 29, 1955 (66) | Residential Address 287 West St Rocky Hill, CT 06067 (41.65342, -72.65031) | Consult to Service/Specialty Audiology Urgency ROUTINE CID 07/30/2021 Seen As Outpatient | Community Care Eligibility <input checked="" type="checkbox"/> BMI Difficulty in traveling |
|---|--|---|--|

ORDER CONSULT
CC Eligibility (DST)
 Patient Preferences
 User Settings

CC Eligibility (DST)
Clinical Service *(required)*
 Polytrauma/Traumatic Brain Injury (TBI)- Individ x ▼ **Search by SEOC**
Specialty Care - Wait Time Std: 28 days - Drive Time Std: 60 min
Establish CC Eligibility based on
 Best Medical Interest of Veteran (BMI)
BMI Criteria *(required)*
 Difficulty in traveling

To be considered if a Veteran has significant difficulties traveling to a VA facility even if the estimated average drive time is less than the drive time standard (30 mins for PC and MH and 60 mins for SC) and doing so would result in clinical compromise to the Veteran's health. Providers should consider the accessibility of the requested service in the community and exhausted VA provided transportation options (SW consult, etc) when making this determination.

Explanation *(required)* 0 / 200

Veteran's Participation Preference *(required)*
☐ Opt-IN for Community Care
☐ Opt-OUT of Community Care
☐ TBD/Deferred
Additional Comments

SAVE CHANGES **Close Consult Toolbox**

Figure: Consult Toolbox dashboard screen

Consult Toolbox

What's New **Help**

| | | | |
|---|--|---|--|
| Veteran Name DSTSEVEN, CHYSHRSEVEN Date of Birth Mar 29, 1955 (66) | Residential Address 287 West St Rocky Hill, CT 06067 (41.65342, -72.65031) | Consult to Service/Specialty Audiology Urgency ROUTINE CID 07/30/2021 Seen As Outpatient | Community Care Eligibility <input checked="" type="checkbox"/> BMI Difficulty in traveling |
|---|--|---|--|

Figure: Consult Toolbox dashboard header showing Community Care eligibility

The VA facility community care staff use the Screening Triage Tool (within the Consult Toolbox) to determine the level of care coordination for each Veteran.

Resources

- [Information on Care Coordination](#)
- [Consult Toolbox user guide](#)

Technical

- Documentation developer: <https://vetsez.com/>

Referrals

Most community care requires an authorization in advance either for initial start of care or reauthorization for a new episode of care (the exception is emergency situations).

Resources

- [Referral Coordination Initiative Joint Operations Center update briefing](#)

HealthShare Referral Manager

Software system for VA medical center staff to use to manage community care referrals, including creating existing authorizations, scheduling veteran appointments, and exchanging documentation electronically with community providers

A referral's lifecycle begins when HSRM receives a referral, and it ends when the episode of care (EOC) is complete, and all medical documentation has been received. There are six steps in the lifecycle. VA performs steps 1 and 2, and VA or the community providers complete steps 3, 4, and 5, as shown in **Exhibit 1**.

Exhibit 1: Referral Lifecycle



Figure: Lifecycle of a referral

Resources

- [HealthShare Referral Manager information sheet](#)
- [A quick guide for providers on how referrals and recording appointments works](#)

Technical

- The HealthShare Referral Manager is part of the HealthShare suite of products which is COTS

Limitations

- Adoption of HealthShare Referral Manager among community care providers is low: "However, we found that as of June 2020, approximately 10,000 community providers had signed up to use the HSRM out of the approximately 1.7 million community providers enrolled in VA's new provider network." — [GAO Report](#)

The HealthShare Referral Manager has a Clinical Viewer. It is a module available within HSRM that allows VA staff and community providers to access a clinical summary of each Veteran's history.

Resources

- [HealthShare Referral Manager clinical viewer information sheet](#)

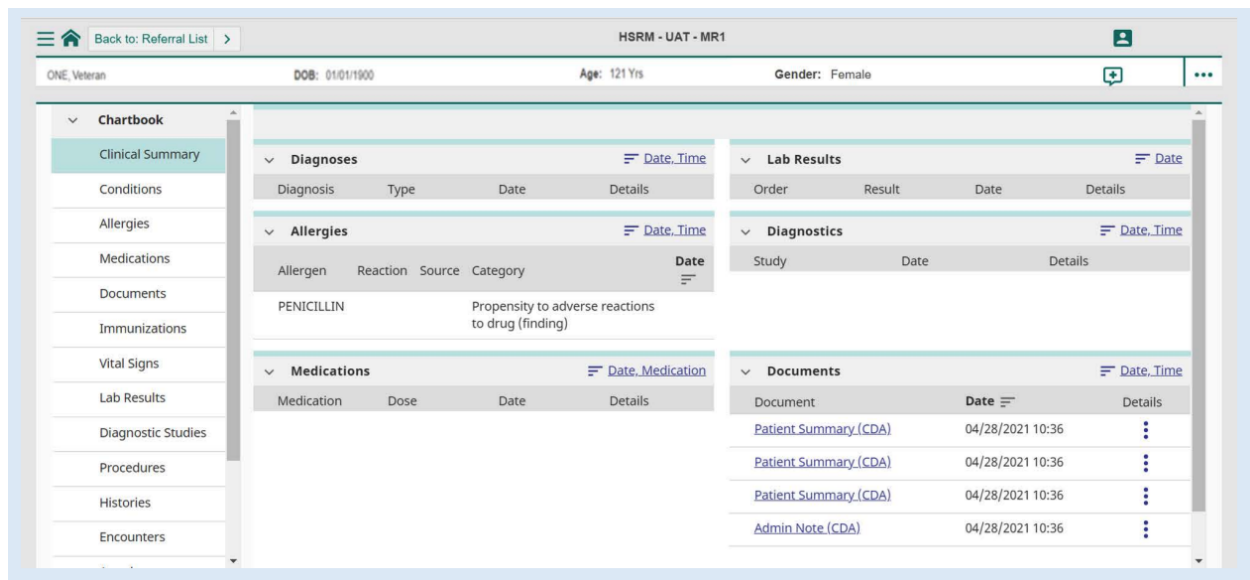


Figure: Screenshot from the HealthShareReferral Manager clinical viewer

Referral Documentation (REFDOC)

Compiles medical information from VistA and CDW to form a complete referral package for the VA community care staff to send to community care providers. It helps extracts EHR records into PDF format. When combined with encrypted emails, it reduces the need for physical mail and fax.

Resources

- [VA enterprise roadmap](#)
- [Statement of Richard Stone for the House committee on assessing the technology to support community care \(April 2019\)](#)

Appointments

Provider Profile Management System

VHA's master database of community providers

Provider Profile Management System Data Web Service

API for PPMS data.

Resources

- [Documentation](#)

Find a community care provider (va.gov)

<https://www.va.gov/find-locations/> allows you to search for community care providers and pharmacies.

Resources

- [Github for Community Care 'Find Locations'](#)
- [Discovery Research Readout: Community Care Provider Locator](#)
- [Alpha Research Readout: Community Care Provider Locator](#)

VA Online Scheduling (VAOS)

Online scheduling allows a Veteran to submit an appointment request for a community care provider. You can find the location of your community care appointment.

There are two ways: [online on va.gov](#) and through a [mobile application](#).

Limitations

- A Veteran can only request certain types of community care appointments online

Records

Resources

- [Federal Electronic Health Record Modernization](#)

Third Party Administrator tools

Third party administrators like Optum have a [Veteran portal](#) where the Veteran can see CCN Claims, Referrals, Appointments, and Enrollment Info.

Community Viewer (deprecated as of April 2022)

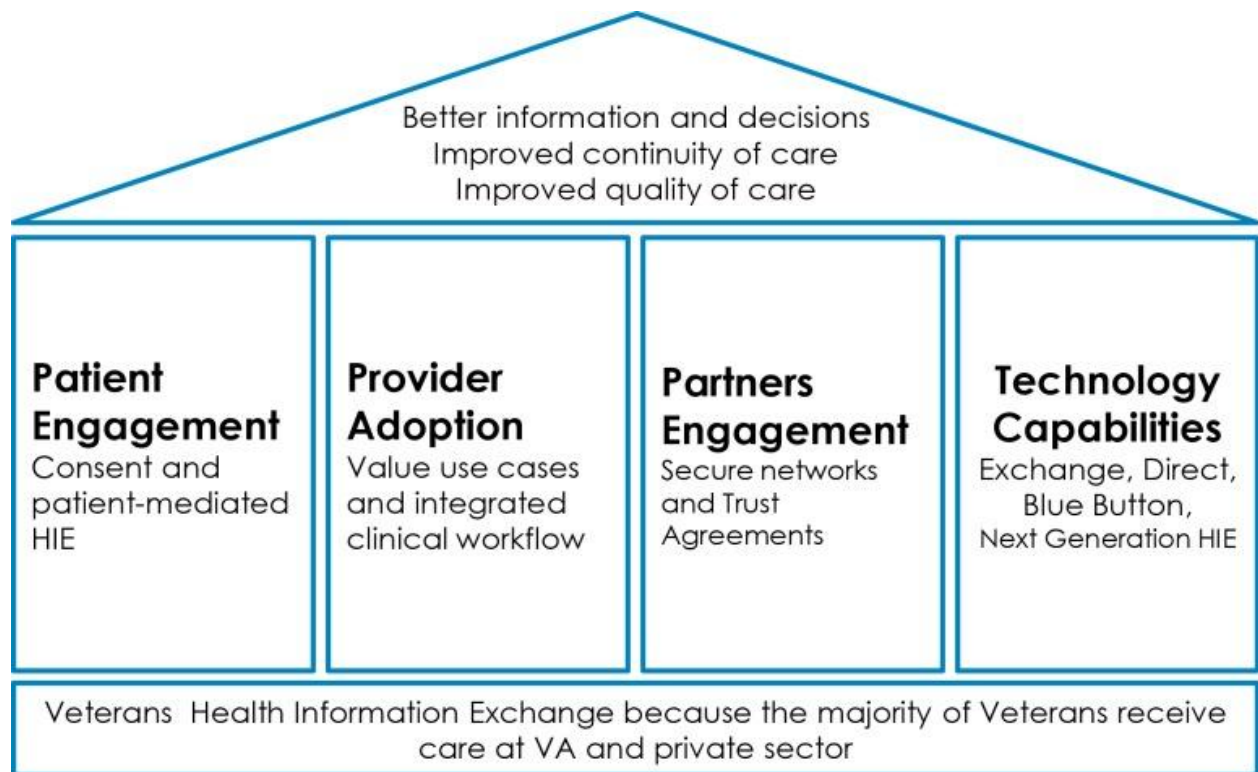
A web-based application that enables community providers to view the full, VA electronic health record of each Veteran assigned to them in Community Viewer.

Note: This is discontinued as of April 11, 2022. It is replaced by the HealthShare Referral Manager Clinical Viewer.

Limitations

- Community Viewer is a view-only application and can not be used for uploading records

Veterans Health Information Exchange (VHIE)



VHIE is organized around 4 pillars

VHIE seems to be an exchange that uses the VDIF (see below) to expand VDIF's coverage. It also appears (not confirmed) that the VA is transitioning from VHIE to VDIF.

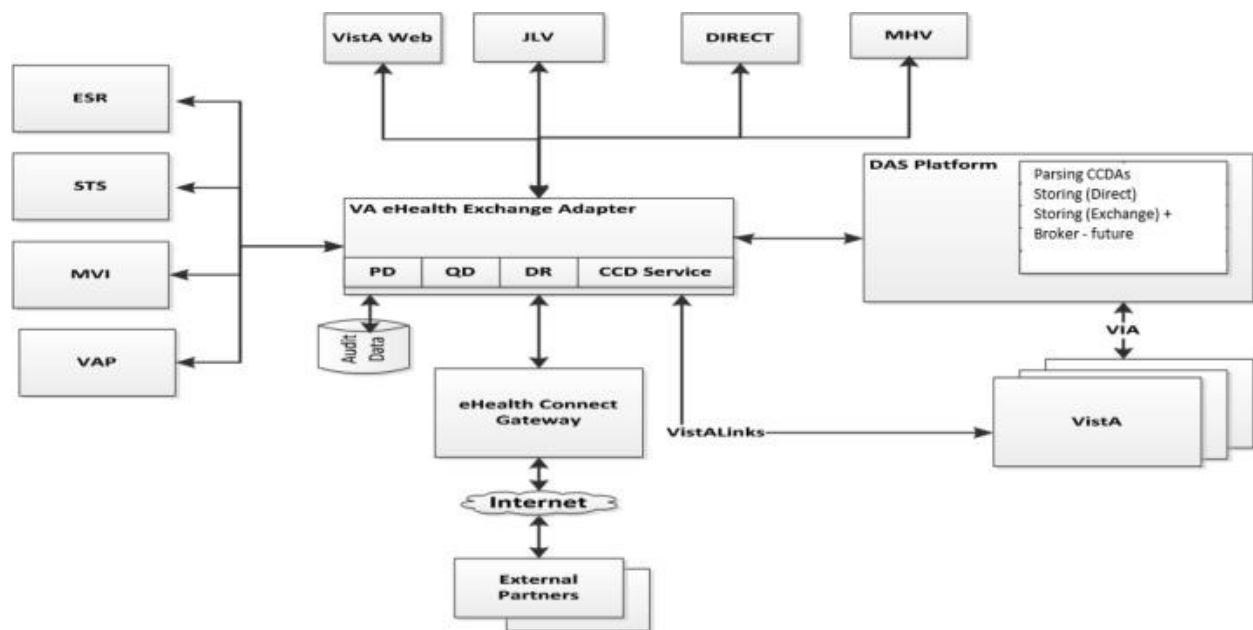
"By transitioning the legacy VHIE application to the VDIF platform, VHIE was able to support the increased demands from the Mission Act while at the same time experiencing enhanced performance and reliability."

Architecture

HIE requires robust technology capabilities, in addition to having a strong people organization, efficient processes and enabling policies. HIE between VA and its partners is conducted over multiple networks using multiple data formats and transport standards. The data exchanged include structured format (e.g., HL7 v2, CCDAs) and unstructured (e.g., PDFs, text, images).

The methods of exchange include portals, Direct Secure Messaging, multiple vendor networks (e.g., eHealth Exchange), specific point-to-point interfaces, portals, direct VA EHR access, regional HIEs, and VA-specific networks.

VHIE program developed a complex technology platform to support these exchanges¹⁵ (Figure below). First, there are gateways that can communicate with other gateways over the Internet in a secure and standard-based method (e.g., eHealth CONNECT gateway to connect to the national eHealth Exchange network). For the eHealth Exchange network, the primary messages exchanged are Patient Discovery (PD) to establish identity correlations, query for documents (QD) and document retrieval (DR). Second, there are adapters that connect and translate between the gateway and the back-end organization systems. For instance, VA eHealth Exchange Adapter is responsible for extracting patient data from VistA EHR, assembling it into a specific format (e.g., CCD), honoring the requester query parameters, and complying with the HL7 CCD standard conformance statements and terminology constraints. Finally, there are organization back-end systems that comprise the EHR (VistA), the Master Patient Index (MPI), the terminology translation server (STS), the consent management module (VAP), the provider GUIs (VistA Web, JLV) and the patient portal (MHV).



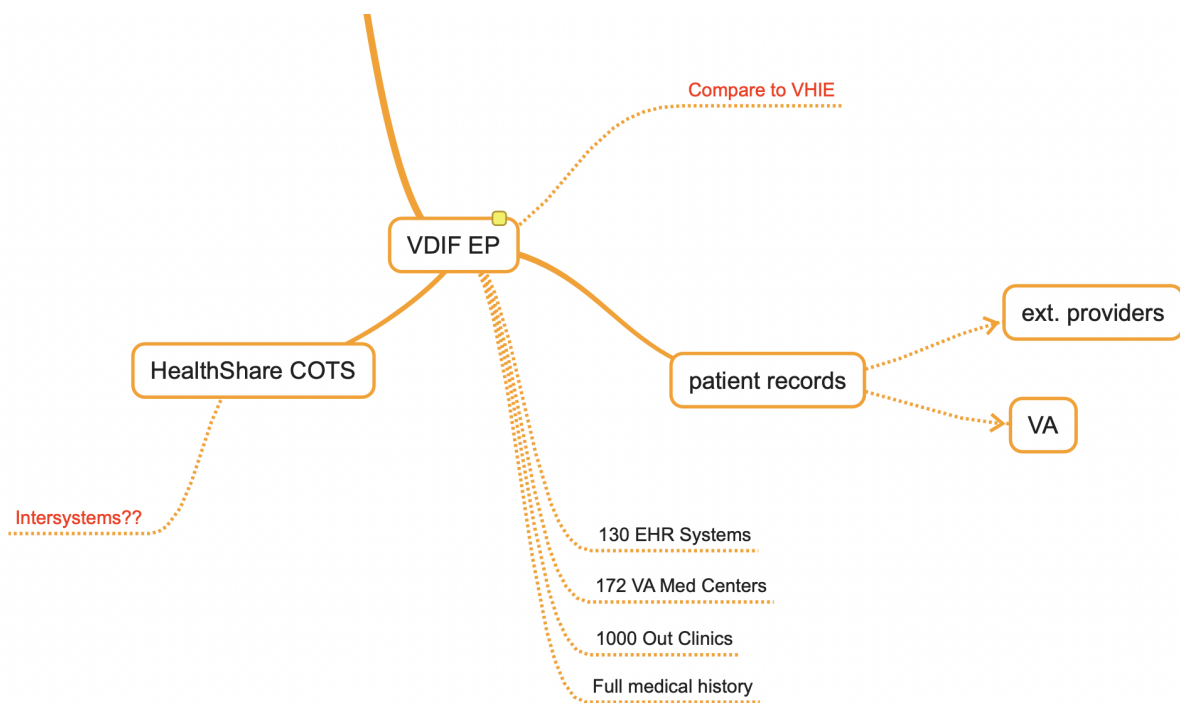
Resources

- [NCBI. NIH Study](#)
- [VA Boosting Interoperability](#)
- [Ellumen](#)

Veterans Data Integration and Federation (VDIF) enterprise platform

VDIF enterprise platform is a Health Information Exchange / technology platform that unifies care information throughout the continuum of care for VA. It acts as an integration and interoperability middle tier, which enables VA to access all of the data associated with a veteran patient across all sites that they've received medical care.

Operational schema



The VHIE has transitioned its legacy adapter (see prior section) to the VDIF. It appears that the VHIE might be the largest entity using VDIF.

Resources

- [Intersystems blurb](#)
- [JP Systems](#)

Prescriptions

If prescription medication is needed, the prescription should usually be sent to and filled by the nearest VA pharmacy. Veterans can receive short-term prescription medication for a 14-day or fewer supply that can be filled at a non-VA pharmacy. A prescription for more than a 14-day supply must be filled by VA.

If a prescription is not in the formulary there is a process for a non-formulary request.

The Veterans Health Administration (VHA) authorizes Veterans to utilize external community pharmacies to fulfill prescriptions. Currently, this is managed using manual, paper-driven interactions between VHA and those pharmacies.

Providers run e-prescribing software.

Resources

- [Optum health guide on prescribing medications for Veterans](#)

National formulary

- [Formulary search tool](#)
 - Does not contain all the information in the spreadsheet
- [Spreadsheet](#) (system of record)

Claims

Community care providers submit a claim to the VA for payment.

Electronic Data Interchange

The VA is transitioning paper claims submitted by community providers to an electronic format known as Electronic Data Interchange (EDI). It appears that most claims are submitted to Third Party Administrators or through other clearinghouses like Change Healthcare. EDIs are fairly standard in claims processing, so most providers will know how to do this.

Resources

- [Paper claims submission process fact sheet](#)
- [File a claim for Veteran Care](#)

Customer Engagement Portal

A [reporting tool](#) for VA medical providers to verify the status of claims as well as run payment reconciliation reports.

Resources

- [External user guide](#)

Third Party Administrator tools

[Optum has an electronic claim submission tool](#). More information on this tool is [here](#).

Veteran facing billing

Copayments are not paid out-of-pocket at the time the eligible Veteran receives care. All VA copayments are billed as part of VA's normal billing process.

Pay.gov

There are many manual ways to pay, but Veterans can [pay online on pay.gov](#)

Resources

- [Community care billing page](#)

Limitations

- You have to [fill out a form](#) with all your VA account information to make the payment.

Messaging and communications

HealthShare Referral Manager

This can be used for documentation exchange.

E-fax

Documentation can be sent via email to a Veterans Affairs Medical Center fax machine.

Azure Rights Management Services (Azure RMS)

Microsoft's cloud-based protection service is an external message encryption tool. This allows VA to securely exchange information with community providers using encrypted email. Community providers no longer have to wait for a Veteran's information via fax or email. This essentially encrypts email.

Resources

- [Technical sheet](#)

Limitations

- Can only securely reply to VA initiated emails, including the ability add attachments. Other software may need to be installed, and licenses may be required for recipients to send unsolicited emails to the VA.

Data

Our initial discovery effort is focused on the systems and tools used to co-ordinate and deliver community care. We did not have time to investigate those systems that monitor Community Care progress and generate other 'business' statistics.

Resources

- [Locations of data on community care](#)

Reading

- [VA website for community care](#)
- [Eligibility guide for veterans for community care](#)
- [Understanding the community care process](#) (single page overview)
- [Understanding the community care process](#) (more detail)
- [GAO report: Improvements needed to help ensure timely access to care](#)

Areas of future discovery

Our current discovery was timeboxed and mostly limited to publicly available documentation.

Observations and interviews to see how the various tools work

- Observe VA staff using the Consult Toolbox and the Decision Support Tool
- Observe community care providers using different systems at various parts of the process (getting referrals, viewing medical records, submitting claims, etc)
- Understand how community care providers who do not have the HealthShare Referral Manager exchange documents with the VA
- Understand the Request for Service process (for care that falls outside the original referral and Standardized Episode of Care)

Investigate systems of record and other canonical data sources

- Work with the technical teams in Community Care to understand what databases, datasources, and other systems of record drive the Community Care tools

Follow the data

- Understand and map how patient, claims and other data flows through the various systems