



FY21 Database & Methods Cyberseminar Series

Session 4 – February 2021

Meet VIREC: The Researcher's Guide
to VA Data

Maria Souden, MSI, PhD

Acting Director, VA Information Resource Center



Database & Methods Cyberseminar Series

Informational seminars to help VA researchers access and use VA databases.

Topics

- VA data sources & data access systems
- Application of VA data to research and quality improvement questions
- Limitations of secondary data use
- Resources to support VA data use



FY21 Upcoming Sessions

First Monday of the month | 1:00pm-2:00pm ET

Date	Topic
3/1/21	Joint Longitudinal Viewer (JLV) and Research, Pt 1: Getting started
3/15/21	Joint Longitudinal Viewer (JLV) and Research, Part 2: A Deeper Look
4/5/21	Race and Ethnicity in VA Data
5/3/21	VA Pharmacy Data
6/7/21	Ascertaining Veterans' Vital Status: Data Sources for Mortality Ascertainment and Cause of Death

Visit our Education page for more information & registration links:

<https://bit.ly/39B1JUo>

Visit HSR&D's VIREC Cyberseminar Archive to watch previous sessions:

<https://bit.ly/3dZFJWG>

Where can I download a copy of the slides?

VA HSR&D

CYBERSEMINARS



SAMPLE EMAIL

Host: HSR&D Cyberseminars (cyberseminar@va.gov)

Event number (access code): 199 009 5117

Event password: 3844

Registration ID: This event does not require an enrollment ID

Join event

To join the audio conference only

To receive a call back, provide your phone number when you join the event, or call the number below and enter the access code.

USA Toll Number: 14043971596

Toll-free dialing restrictions:

https://www.webex.com/pdf/tollfree_restrictions.pdf

Access code: 199 009 5117

[Please download today's slides](#)

[Please click here for today's live captions](#)



FY21 Database & Methods Cyberseminar Series

Session 4 – February 2021

Meet VIREC: The Researcher's Guide
to VA Data

Maria Souden, MSI, PhD

Acting Director, VA Information Resource Center

Provide an overview of VIREC, our products, our services, and our Web environments.

By the session's end, you should be able to...

1. Describe **VIREC activities and value** to the research & quality improvement communities.
2. Understand **key VIREC product types** and their use in supporting work with VA data.
3. Identify **websites and resources** supporting VA data use.
4. Know where to go for **additional questions** and customer service.

Poll #1: Your typical **role** in research and/or quality improvement projects

- Investigator, PI, Co-I
- Statistician, data manager, analyst, or programmer
- Project coordinator
- Other – please describe via the chat function



Poll #2: Your **experience** working with VA data

- None – I'm brand new to this!
- One year or less
- More than 1, less than 3 years
- At least 3, less than 7 years
- At least 7, less than 10 years
- 10 years or more



Poll #3: How familiar are you with VIREC, its products, and services?

- Frequent user
- Familiar with, use sometimes
- Aware of, never used
- Not at all familiar



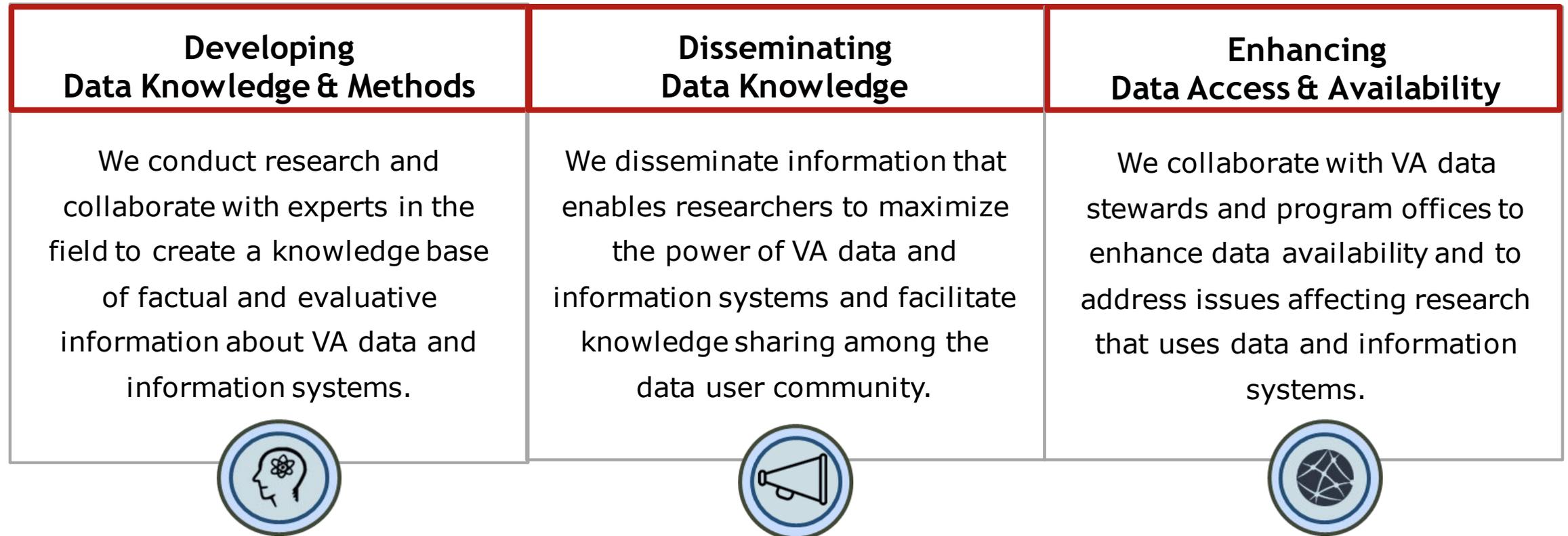


Who are we and what do we do?



Our mission is to advance VA capacity to use data effectively for research and quality improvement and to foster communication between research data users and the VA healthcare community.

We do this by...



VIReC Essential Functions and Expertise

Initiatives supporting a continuum of research data needs



Liaison



Data Access & Availability



Data Translation & Data Knowledge



Education & Dissemination



HelpDesk & Knowledge-Sharing



Data Stewardship



Data Collection Software

Product & Service Strategy

Listen to customers and stakeholders

- HSRData Listserv
- Outreach & HelpDesk
- Web Analytics
- Needs Assessment
- Organizational priorities

Advocate for research use

- Data Access
- Reduce Barriers
- Increase Knowledge



Create documentation and knowledge

- Data Environment
- Target Audience
- Data Source
- Recent Data Updates

Promote information

- VIREC Website(s)
- VHA Data Portal
- National Conferences
- HelpDesk
- HSRData

Poll #4: Which of the following VIREC products & services do you use?

- VIREC data, methods, and technical documentation
- VIREC website & VHA Data Portal
- VIREC HelpDesk or HSRData Listserv
- Other (*please specify in chat box*)
- I have not used any VIREC products





How can I access VIReC resources?

vaww.virec.research.va.gov

VIREC INTRANET

VA INFORMATION RESOURCE CENTER (VIREC)

Delivering current news right to your inbox. [Learn More...](#)

Data Issues Brief, September 2017

Upcoming Cyberseminars

Real SSN Data Request Process

VA REDCap Project

Data Tip of the Month

New from VIREC

New CDW Factbooks
The latest CDW Factbooks contain technical, clinical, and/or procedural descriptions of tables, columns, and values.

- LabChem 2.0 Domain
- Inpatient 3.0 Domain (Part I - Inpatient)

The Researcher's Notebook #9
This issue is devoted to clarifying the diverse content found in the records of the three main tables of CDW's Outpatient Domains: Outpat.Visit, Outpat.Workload and Outpat.VisitLogic.

The Researcher's Notebook #8
This issue acts as a SQL guide for creating an analytic dataset defined by CPT codes and stop codes.

VA network only
News & new resources
Resources for working with data

www.virec.research.va.gov

VIREC The Researcher's Guide to VA Data
VA Information Resource Center

Health | Benefits | Burials & Memorials | About VA | Resources | News Room | Locations | Contact Us

Assisting VA Researchers | Non-VA Researchers | Educators

Welcome to our Internet website.
Looking for VIREC's resources for VA researchers? Visit our Intranet site. [Learn more...](#)

Who We Are
VIREC is an HSR&D funded resource center. Our mission is to advance VA capacity to use data effectively for research and quality improvement and to foster communication between research...

Announcements
VIREC Good Data Practices 2017
It's not too late to check out VIREC's Good Data Practices Series! Learn about best practices in data use and management in this popular cyberseminar series.

Upcoming Events
October 02: Overview of VA Data, Information Systems, National Databases and Research Uses
October 17: Making Laboratory Data Accessible: Pitfalls and Solutions in...

Information for Non-VA
Public-facing
VIREC Overview
Publications & events
Cyberseminars

<http://vaww.vhadatportal.med.va.gov>

Department of Veterans Affairs
VHA Data Portal

Data Sources | Data Access | Tools & Applications | Resources | Training | Policy & Admin | Support

Welcome to the VHA Data Portal

The VHA Data Portal promotes a knowledge-sharing culture that supports the needs of VHA data users. The Portal integrates information from multiple sources into a single location to promote a comprehensive knowledge base and to facilitate a positive end-user experience.

The one-stop-shop for data users' needs.
Our home page design has recently changed to help get you the information you need. Each one of the badges below links to access information and other relevant resources for a particular data use need, or use the new top navigation menu to locate resources by category. [Tell us what you think.](#)

New Data User

Research

Operations & Quality Improvement

Upcoming Events

VIREC Cyberseminars

- Oct 02: Overview of VA Data, Information Systems, National Databases and Research Uses (Souden, M)
- Oct 17: Making Laboratory Data Accessible: Pitfalls and Solutions in CDW Data (Hauser, R)
- Nov 06: Requesting Approval for Access to VA Data (Ezzo, M)
- Nov 21: Examining Women Veterans' Enrollment in the Veterans Choice Program (Mattocks, K)
- Dec 04: Measuring Veterans' Medicare Enrollment (Ezzo, M)

VINCI Cyberseminars

- Oct 12: VINCI SAS/GRID (Ezzo, M)

VINCI Happy Hour
3rd Wednesday Every Month at 3 PM ET
VINCI in its continuing efforts to assist VHA data users will be holding its VINCI Happy Hour open question and answer forum every 3rd Wednesday of the month from 3:00PM to 4:00PM ET to field questions from our customers on a range of topics. [Click here](#) to join the Lync meeting and call 855-787-1051 code 22265684.

VA network only
Collaborative with NDS & VINCI
Data source & access information

VIREC Data Knowledge Sites

VIReC Education & Cyberseminar Series

Database & Methods



Introduction to VA data and information systems and their use in research

Using Data & Information Systems in Partnered Research



Focus on implementation, evaluation, and research-operations partnerships

VA REDCap Education Hour



Weekly open question and answer time with members of the VA REDCap support team

<https://www.virec.research.va.gov/Resources/Cyberseminars.asp> (VA Intranet)

VIReC HelpDesk for Individualized Support

Assists researchers with understanding VA data and information systems within the context of their specific projects.

- VIReC subject matter experts respond directly to HD questions
- Use organizational knowledge and liaison relationships to connect requestors with the expertise they need



HSRData Listserv for Community Knowledge Sharing

- Members **ask and answer** specific questions about using VA data
- Nearly **1,600 participants**
- Multiple perspectives from across the **VA data ecosystem**: PIs, fellows, analysts, data managers, statisticians, operations and program staff, data stewards, resource center experts, data architects
- Shared experience and tacit knowledge about **historical and nuanced aspects of VA data** and their application to research questions



LISTSERV ▼

Veterans Affairs Listserv
www.listserv.va.gov

HSRDATA-L Archives
Health services research data discussion list

HSRDATA-L@VAWW.LISTSERV.VA.GOV

Options: Use Classic View

- Show Pending Messages
- Show Drafts
- Hide Table of Contents

Micro/Mycobacteria
regionFY15 in dim.sta3n
Tomorrow - Cerner Data Education - please join us!
Patients show up in administrative data but not JLV!
VINCI Training Hour - February 19th at 3PM ET - VINCI 101-Getting Started Using VINCI
ZIP CODES: Outpat.Visit vs. PSSG
VR12 current algorithm
Surgery end times
Minitab issues?
Data analysts, SAS, SQL programmers, data scientists
ProviderClass & PositionTitle
distance from veteran home ZIP code to care provider site
Rare diseases diagnoses
PIT Federal Provider Number
CHAR4 codes
ALS researchers
Mental Health Hospitalizations -- how to identify?
the field GISURH
Purchased Care Data - - VAMC/Health Care System
Inpatient Pharmacy Documentation
Fidelity of Pharmacy Data
Identifying ICU best practices
Enrollment Priority Duplicates
identifying e-consults in CDW
ScheduledAdmissionsFlag
Specialist Consult
Identifying HIV Patients
Use of NSAIDs in DSS PHA file?
VA or non-VA home services/respice care
VA SAIL Data - Usable Format
using CPT codes to extract CDW dialysis data

<http://vaww.virec.research.va.gov/Support/HSRData-L.htm>

(VA Intranet only)



- Quarterly news for users of VA data and information systems
- Focus on clinical and administrative data resources, VA databases, clinical informatics, electronic health record
- Timely topics, spotlight tips, and training opportunities

Links to current and archived issues:

<https://vaww.virec.research.va.gov/DIB/Overview.htm>

(VA Intranet only)

VIREC Data Issues Brief
Fall Edition 2020

The *Data Issues Brief* delivers current news and updates regarding health data, databases, and medical informatics right to your inbox.

In This Issue...

<p>VIREC News & Updates Come Work with VIREC! Updated CDW Factbooks: Appointment & Mental Health Domains Updated Historical Information for MCA Stop Codes</p> <p>EHRM in Action EHRM Rollout Updates for Data Users EHRM Resources for Data Users New Research & EHR Synergy Cyberseminar Series OEHRM Data Education Series JLV Now Includes Cerner Data Domains Reminder: Population Health Report Builder to Help with EHR Transitions</p> <p>Data & Information Systems News New Medicare Claims for Veterans with COVID-19 CMS Provider Data Available on SAS Grid SHEP Now Collects Sexual Orientation & Gender Identity Data</p>	<p>Visit the VHA Data Portal New Resource on Left Ventricular Ejection Fraction</p> <p>Cyberseminars Upcoming Presentations Archived Presentations</p> <p>Training & Resources VA REDCap Education JLV Training & Resources</p> <p>Upcoming Conferences AMIA 2020 Virtual Annual Symposium D&I 2020 Virtual Conference</p> <p>HSRData Listserv Recent Topics</p> <p>Tip of the Month How do I use SQL and CDW for data management purposes?</p> <p>Product Spotlight</p>
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Data Resources in Action

Where do I go for ... ?
A look at some general use cases

#1 Learning about available data

VHA Data Portal *Compendium of Data Sources*

<http://vaww.vhadataportal.med.va.gov/DataSources/DataSourcesOverview.aspx>
(VA Intranet)



Department of Veterans Affairs
VHA Data Portal

Home About Us Contact Us FAQ Report Broken Link

Data Sources Data Access Tools & Applications Resources Training Policy & Admin Support

Data Sources > Data Sources Overview

Quick View
The VHA Data Portal defines a data source as where the data comes from or a place to access data for a project or study.

Data Sources Overview

Overview
In VHA, the term data sources is often used to describe specific bodies of data such as, inpatient data, electronic health record data, mainframe SAS data sets, and the Corporate Data Warehouse (CDW).
The VHA Data Portal defines a data source as where the data comes from or a place to access data for a project or study. These data sources include data reports, data sets, data files, databases, data warehouses, and data repositories.

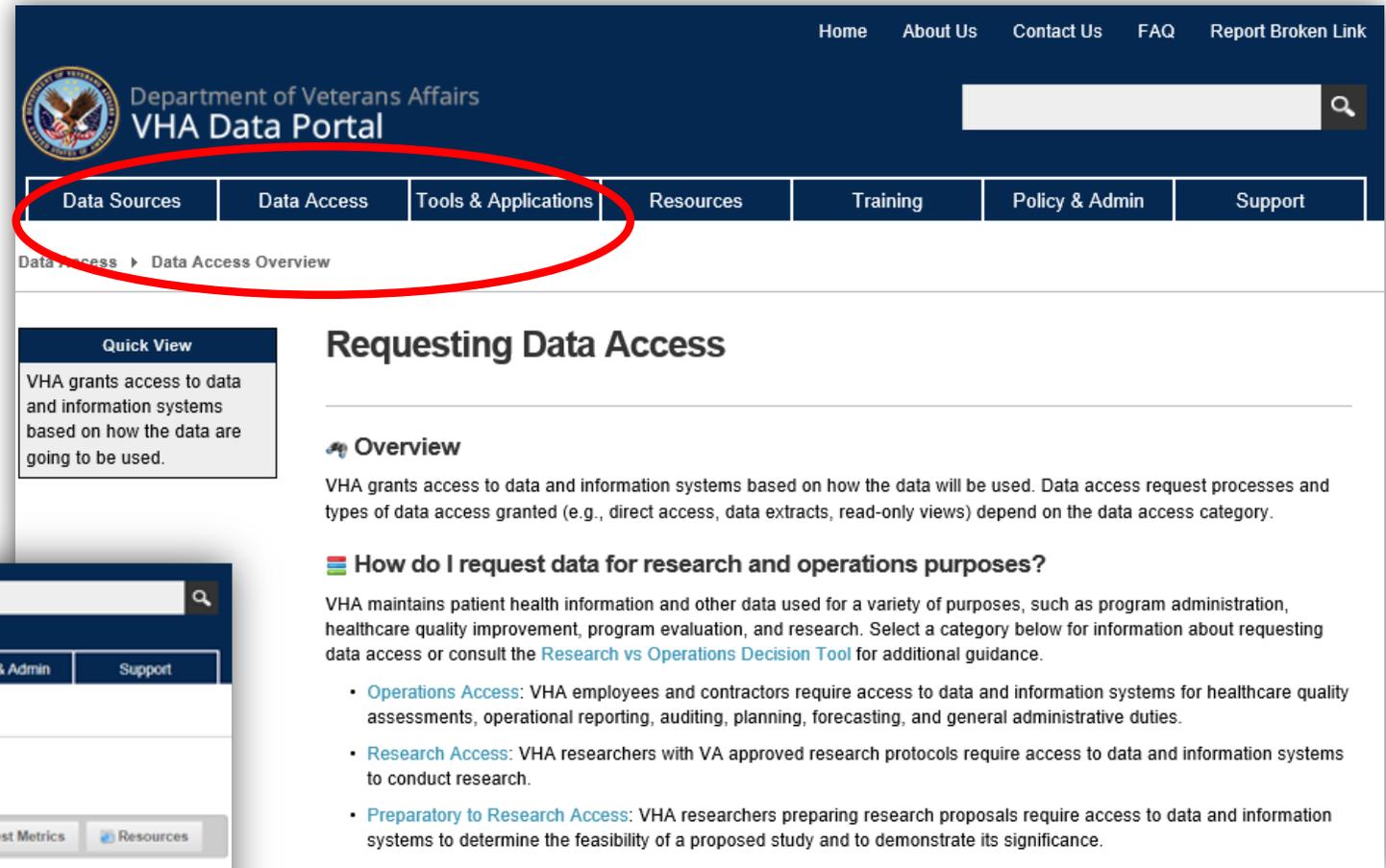
Data Sources
Select a data source from the list below to view a brief description and link to more information about each source. Expand the Data Source option in the quick links for a quick view of all data sources and links to their pages.

+ Expand All

- Assistant Deputy Under Secretary for Health (ADUSH) Enrollment Files
The ADUSH for Policy and Planning Enrollment files contain enrollment, eligibility, demographic, cost, and location information for VHA enrollees and non-enrollees who have received VA care. [Learn more...](#)
- Austin Information Technology Center (AITC) Mainframe
- Beneficiary Identification & Records Locator System (BIRLS) Death File
- Bereaved Family Survey (BFS) Database
- Care Assessment Need (CAN) Scores
- Corporate Data Warehouse (CDW)
CDW is an evolving repository of national VHA data. It is a physical implementation of a logical data model at the enterprise level for VHA. [Learn more...](#)
- Health Economics Resource Center (HERC) Cost Data
- Homeless Registry

#2 Process to request VA data

VHA Data Portal Detailed Access and Permissions Processes



Department of Veterans Affairs
VHA Data Portal

Home About Us Contact Us FAQ Report Broken Link

Data Sources Data Access Tools & Applications Resources Training Policy & Admin Support

Data Access > Data Access Overview

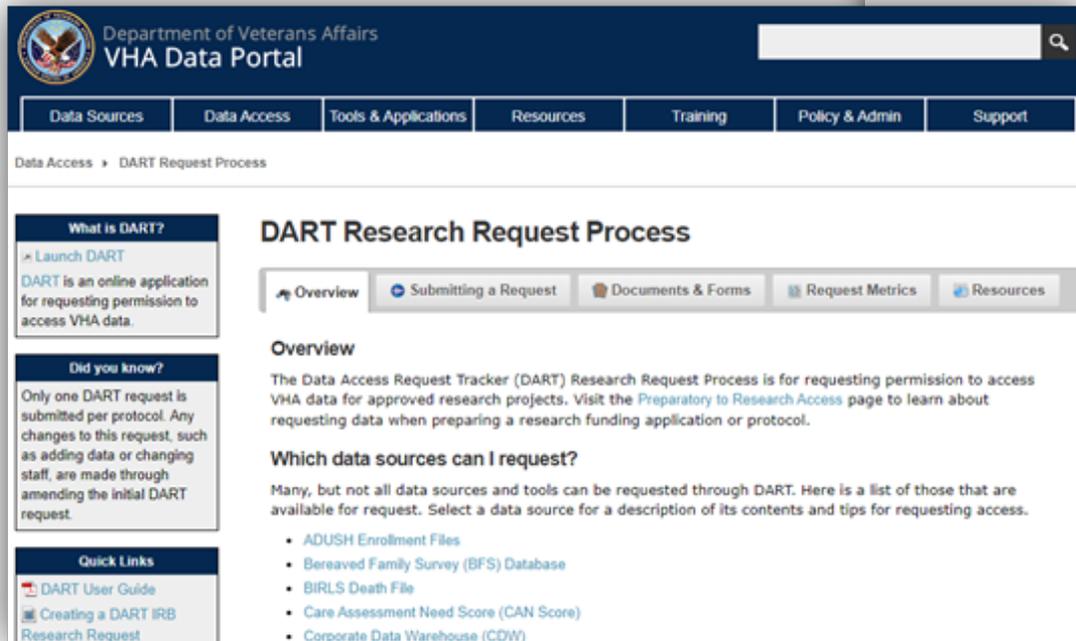
Requesting Data Access

Quick View
VHA grants access to data and information systems based on how the data are going to be used.

Overview
VHA grants access to data and information systems based on how the data will be used. Data access request processes and types of data access granted (e.g., direct access, data extracts, read-only views) depend on the data access category.

How do I request data for research and operations purposes?
VHA maintains patient health information and other data used for a variety of purposes, such as program administration, healthcare quality improvement, program evaluation, and research. Select a category below for information about requesting data access or consult the [Research vs Operations Decision Tool](#) for additional guidance.

- Operations Access:** VHA employees and contractors require access to data and information systems for healthcare quality assessments, operational reporting, auditing, planning, forecasting, and general administrative duties.
- Research Access:** VHA researchers with VA approved research protocols require access to data and information systems to conduct research.
- Preparatory to Research Access:** VHA researchers preparing research proposals require access to data and information systems to determine the feasibility of a proposed study and to demonstrate its significance.



Department of Veterans Affairs
VHA Data Portal

Data Sources Data Access Tools & Applications Resources Training Policy & Admin Support

Data Access > DART Request Process

What is DART?
Launch DART
DART is an online application for requesting permission to access VHA data.

Did you know?
Only one DART request is submitted per protocol. Any changes to this request, such as adding data or changing staff, are made through amending the initial DART request.

Quick Links
DART User Guide
Creating a DART IRB Research Request

DART Research Request Process

Overview Submitting a Request Documents & Forms Request Metrics Resources

Overview
The Data Access Request Tracker (DART) Research Request Process is for requesting permission to access VHA data for approved research projects. Visit the [Preparatory to Research Access](#) page to learn about requesting data when preparing a research funding application or protocol.

Which data sources can I request?
Many, but not all data sources and tools can be requested through DART. Here is a list of those that are available for request. Select a data source for a description of its contents and tips for requesting access.

- ADUSH Enrollment Files
- Bereaved Family Survey (BFS) Database
- BIRLS Death File
- Care Assessment Need Score (CAN Score)
- Corporate Data Warehouse (CDW)

#3 Contents and structure of data

VIReC documentation of CDW data

<https://vaww.virec.research.va.gov/CDW/Documentation.htm>
(VA Intranet)

Data Documentation

Expand each type of documentation below to view these resources.

+ Expand All

+ Getting Started with CDW

+ Factbooks

+ The Researcher's Notebook

+ Statistical Snapshot

+ Domain Layout & Descriptions

+ Data Contents, Discrete Frequencies, Record & Null Counts

VIReC INTRANET

Search All VA Web Pages Search Open Advanced Search

VA INFORMATION RESOURCE CENTER (VIReC)

VIReC Home
About Us
VA/CMS Data for Research
VHA Data Portal
New Users of VA Data
FAQs
Acronym Lookup
HelpDesk
Report Broken Link
How are we doing?

VHA Corporate Data Warehouse (CDW)

Overview

The Veterans Health Administration (VHA) Corporate Data Warehouse (CDW) is a national repository of data from VistA and several other VHA clinical and administrative systems. The CDW is physically located at the Austin Information Technology Center.

The CDW is a relational database organized into a collection of data domains. Domains represent logically or conceptually related sets of data tables. Domain themes generally indicate the application in the VistA electronic health record system from which most of the data elements in the domain come (e.g., Vital Signs or Mental Health Assessment).

Visit the "[CDW FAQs](#)" section of this page for answers to frequently asked questions about CDW data.

Available Data

Data are generally available from October 1999 - present. Availability varies by domain. [CDW's SharePoint site](#) provides an up-to-date list of available domains with some structural documentation in the Metadata Reports section.

VistA is the primary source of CDW data. CDW data domains are classified as either production or raw. Tables in production domains have been architected (e.g. to add keys and indexes) to support flexibility of queries, but no filtering of records, editing of content or business rules have been applied to these data. Raw data domains reflect the source system structure (VistA) and are not modeled, standardized, or indexed.

Requesting Access

The process for requesting access depends on how the data will be used. VIReC provides data access information through our collaboration on the VHA Data Portal. Visit the Portal for details on accessing CDW data by selecting from the following data use categories. If you're not sure which option to select, visit the [Data Access Overview](#) on the VHA Data Portal.

[Research](#) | [Preparatory to Research](#) | [Operations](#)

Resources for Researchers

- [CDW FAQs](#) provide answers to frequently asked questions about CDW data
- [Statistical Snapshots](#) provide detailed descriptions of tables, columns, and values in select CDW domains.
- [The Researcher's Notebook](#) lays out methodological approaches to working with CDW data. Each issue elaborates on a nuance of data use for a specific topic or research question and conveys practical information from the perspective of data users in the field.
- [Introductory CDW Cyberseminars](#) provide a conceptual overview of relational data, the structure of CDW's data, and beginning SQL coding.
- [Summary Documentation](#) for CDW includes factbooks, domain layouts and descriptions, record counts, counts of null values, and discrete value counts.
- Medical SAS Outpatient variables have been mapped to CDW data fields. Visit the "[NPCCD CDW Transition](#)" page on CDW's SharePoint site to access the map and for information on differences in variable formatting, data transformations and calculated variables only in the Medical SAS files.
- Visit the [VINCI Central](#) website to learn more about using a VINCI workspace to analyze and view CDW data for research projects.
- The [CDW SharePoint site](#) provides has an announcements section that provides up-to-date information on topics such as newly released data, missing data, and training available.

Frequently Asked Questions (FAQs)

+ Expand All

- + How do I find data in the CDW that is relevant to my project?
- + How do I find documentation related to CDW?
- + How do I find the meaning of a linking key in the CDW?
- + How do I build a SQL query or join tables in the CDW?
- + How do I use SQL and CDW for data management purposes?
- + How do I report a potential CDW data quality issue?
- + Where can I find a high-level summary of the contents in the CDW?

Learn About CDW

- Overview
- Data Transition to CDW
- Documentation
- FAQs

General Resources

- Data Access
- Data Sources
- Data Tools
- Data Topics
- Products & Services
- Special Projects

VIReC Product Spotlight

CDW Factbooks

provide detailed descriptions of tables, columns, and values in select CDW domains

VIReC Factbook

Corporate Data Warehouse (CDW)

Outpatient 2.1 Domain

September 2016

Factbook



Part 3. Clinical Context

According to the *Outpatient Domain Release Document* [28], the primary fact table *Outpat.Visit* contains records from three VistA files: *Visit* (#9000010) file, *Outpatient Encounter* (#409.68) file and the *Patient* (2) file. The VistA file *Visit* (#9000010) is a collection of care and non-care records related to patients and non-patients that

Part 4. Table and Column Descriptions

Part 4 describes each table in the Outpatient 2.1 Domain and selected columns within each table. It is organized by table. The name of the table is presented in large font with a description of its general content immediately following. After each table description, selected columns within that table are described. Table 1 summarizes the various parts of the column descriptions.

Table 1. Content of Column Descriptions

Part 5. Primary and Foreign Key Connections Query

Once you have been granted access to CDW data, this query can be used to generate an up-to-date list of primary and foreign keys associated with this domain.

```
SELECT TOP 1000 [FKSchemaName]
```

Part 6. Example SQL Code for Basic Research Questions

This section contains a series of simple research questions that are answered by applying basic SQL queries to the data in this domain. The three research questions include:

- How does *Outpat.Visit* compare to *Outpat.Workload*, in terms of number of records?
- What appointment status is associated with visits at my station last month?
- What are the 10 most common primary diagnoses for outpatient encounters at my station last month?

Question 1. How does *Outpat.Visit* compare to *Outpat.Workload*, in terms of number of records?

```
SELECT COUNT (VisitSID) TotalNumVisitsInJan
FROM CDWork.Outpat.Visit
WHERE VisitDateTime >= CONVERT (DATETIME2(0), '1/1/2015')
AND VisitDateTime <= CONVERT (DATETIME2(0), '1/31/2015') ;
```

TotalNumVisitsInJan

17,652,832

```
SELECT COUNT (VisitSID) as TotalWorkloadVisits
```

#3 Technical aspects of working with data

Getting Started with CDW

These cyberseminars are designed to help new CDW users with understanding the nature of relational data, becoming familiar with CDW structure and logic, finding documentation of CDW content, and knowing what to expect when first viewing CDW data in SQL Server Management Studio (SSMS) software.

Resources	Released	 Resource
CDW: A Conceptual Overview	Mar 2017	
CDW: Locating Its Documentation	Apr 2017	
Getting the Information You Need From CDW: SQL Starter Language	Jan 2015	
Querying CDW Metadata Views	May 2018	
Building Your Dataset in CDW: Joining Tables within a Domain	Jul 2015	
Getting CDW Back Together: Joining CDW Tables (Continued)	Oct 2016	
Data Management in SQL: Selected Intermediate SQL Skills	Oct 2016	

<https://vaww.virec.research.va.gov/CDW/Documentation.htm>

Email virec@va.gov to be notified of new CDW products and seminars.

New to
using
CDW?

#4 Conceptual aspects of working with data

 **VIReC Resources**

[Meet VIReC, The Researcher's Guide to VA Data:](#)
Learn about us, our products, and how to navigate our web environments.

[Learn about VA data:](#)

- Data Sources
- Data Topics**
- Data Tools

[VA/CMS Data for Research Project:](#) Data custodian for CMS and USRDS data for VA research.

[Factbooks:](#) Describe tables, columns, and values in select CDW Domains.

Data Sources
 Data Topics
 Data Tools

Data Topics

VIReC provides information and guidance on using data to address various topics relevant to VA research. Select a data topic from the list below to view a brief description and link to more information about each topic.

- Accuracy of Death Dates
- Cause of Death
- Comorbidity
- Cost of Care
- Data Quality
- Emergency Department & Urgent Care Encounters
- Electronic Health Record Modernization (EHRM) & Implications for Data Users
- Geocoded Data
- VA-Health and Retirement Study (HRS) Data
- Home Telehealth
- ICD-10 Implementation
- Laboratory
- Long Term Care
- Mortality Data
- Nursing
- Patient Satisfaction
- Pharmacy
- Polytrauma
- Preparatory to Research
- Priority Groups
- Race & Ethnicity
- VA Care in the Community
- Veteran Homelessness
- Veteran Statistics
- VistA
- Vital Status Ascertainment
- Women Veterans' Health Data

VIReC "Data Topics" Collection

<https://vaww.virec.research.va.gov/Intro/Working-with-VA-Data.htm>

#5 Applications of VA data



The Researcher's Guide to VA Data

VA Information Resource Center

VIREC Home

About Us

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Cyberseminars

Data Issues Brief

HSRData-L Listserv

Information About VA Data

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Summary Documentation

Tutorials

VA REDCap Project

VA/CMS Data for Research Project

Support

Research in the VA

VIREC » VIREC Cyberseminars

VIREC Cyberseminars



Cyberseminar Series

VIREC hosts several cyberseminar series to provide expert discussion and guidance on key issues related to using VA data for research.

- Database & Methods
- New! Research & EHR Synergy
- Using Data & Information Systems in Partnered Research
- Good Data Practices
- Corporate Data Warehouse (CDW)
- Clinical Informatics
- Innovations in Healthcare Informatics

VIREC cyberseminars are supported by the Health Services Research and Development Service (HSR&D) Center for Information Dissemination and Education Resources (CIDER).

Upcoming Seminars

Register for an upcoming session by selecting register from the table below or by accessing the [HSR&D Cyberseminar Catalog](#).

Date/Time*	Presentation	Series	Presenter(s)	Register

<https://www.virec.research.va.gov/Cyberseminars/Database-Methods.asp> (public internet)

Database & Methods Cyberseminar Series

Navigating the VA Data Landscape

VIREC's Database & Methods Series is an introductory guide to VA data and information systems. Sessions are designed to help VA researchers understand common VA data sources and how they are used in research and quality improvement. This series is suitable for all levels.



Current Schedule

Archive

Archive

The Database & Methods Cyberseminar Archive allows access to prior sessions. It features presentations from the current year's schedule along with those from previous years. Sessions are point-in-time; information is current and accurate for the year in which the information was presented.

Select a title below to access the recording, handout, and transcript for that session.

Date	Title	Key Topic(s)	Presenter(s)
11/4/2019	Requesting Approval for Access to VA Data Explains how VHA data access procedures differ based on purpose of work and demonstrates resources for identifying data request requirements and submitting a data request.	Data Access	Kok, L
10/7/2019	Overview of VA Data, Information Systems, National Databases and Research Uses Introduces the series; common VA data sources and their uses; platforms and tools for using VA data; and where to find additional resources.	Overview	Souden, M
9/9/2019	Advanced Comorbidity Measures Takes a deep dive into comorbidity measures for a more advanced audience. Prerequisite: Comorbidity Measures Using VA & CMS Data introduces approaches to and issues in assessing comorbidity using VA and Medicare claims data.	Comorbidity	Hynes, D
7/1/2019	Joint Legacy Viewer (JLV) Research Chart Review for VA, DoD and Community Records Discusses data type considerations when conducting a chart review in JLV, specific functions in JLV to facilitate record review, and examples of using JLV in research.	EHR	Omizo, R
6/3/2019	Diagnoses, Labs, and Meds, Oh My! Using CDW to Define a Study Cohort by Multiple Criteria Demonstrates how to identify study cohort based on occurrence of condition-relevant ICD-9/10 codes, utilization of condition-relevant medication, and condition-relevant lab results.	CDW, Lab Data	Richardson, P Royse, K
5/8/2019	United States Veterans Eligibility Trends and Statistics: A New Data Source with Socioeconomic Variables Introduces USVETS database including addressing its accuracy, completeness, consistency, validity, and timeliness; defines available socioeconomic data; and describes process to obtain access to USVETS.	USVETS	Bhargava, A Hauser, G
4/1/2019	Assessing Race & Ethnicity in VA Data Describes how to locate race and ethnicity data and assess its quality in VA and Medicare.	Race, Ethnicity	Mor, M

#6 Methods for working with VA data

 **VIReC Resources**

[Meet VIReC, The Researcher's Guide to VA Data:](#)
Learn about us, our products, and how to navigate our web environments.

[Learn about VA data:](#)

- [+ Data Sources](#)
- [+ Data Topics](#)
- [+ Data Tools](#)

[VA/CMS Data for Research Project:](#) Data custodian for CMS and USRDS data for VA research.

[Factbooks:](#) Describe tables, columns, and values in select CDW Domains.

[Research User Guides:](#) Detailed information on select data sources, including variable descriptions.

[The Researcher's Notebook:](#) Practical information on using data from researchers in the field.

[Cyberseminars:](#) Expert discussion and guidance on key issues related to using VA data.

[Data Reports:](#) Technical reports, data investigations, and data quality updates.

[Summary Information:](#) Current and historical information about dataset variables, counts, and frequencies.

[Publications:](#) A complete list of peer reviewed articles and journal supplements published by VIReC.

<https://vaww.virec.research.va.gov/Notebook/Overview.htm>

Current Issues

How are we doing? Take our [short survey](#) to share your thoughts about *The Researcher's Notebooks* below. We value your feedback.

#	Notebook	Author	Released	View PDF
21	New! Using PowerForms to Explore Cerner Millennium Data	Culbreath, C Jones, L	Nov 2020	
20	Community Care Data: Comparison of Claims in the CDW FBCS Domain and PIT Domain	Arnold, N	Jun 2020	
19	Community Care Data: Comparison of FBCS Domain and Purchased Care Domain Data	Arnold, N	Jun 2020	
18	Exploring Relationships between Procedure and Diagnosis Data in the CDW Outpatient Domain	Jones, L Culbreath, C	Apr 2020	
17	Overview of Three Community Care Data Sources	Arnold, N	Feb 2020	
16	Matching VA Identifier to DoD Identifier: PatientICN to EDIPI Using CDW's MVI Domain	Gonsoulin, M Jones, L	Jul 2019	
15	Exploring the Three Procedure Tables in the CDW Inpatient Domain	Gonsoulin, M Culbreath, C	Apr 2019	
14	Identifying Encounters in CDW by Clinic Location versus Provider Type	Gonsoulin, M Jones, L	Mar 2019	
13	Defining a Cohort with a Diagnosis & Medication: Using CDW to identify VA outpatients with a diagnosis of Rheumatoid Arthritis who are taking Etanercept	Gonsoulin, M Joseph, AM Culbreath, C	Nov 2018	
12	Identifying CLC Stays in CDW	Scott, WJ Gonsoulin, M Ramanathan D Intrator, O	Sep 2018	
11	Procedure Codes in VHA: Use of Inpatient ICD Procedure vs	Wagner, T Lachance, M	Jun 2018	



VIReC Product Spotlight

The Researcher's
Notebook
lays out
methodological
approaches to
working with CDW
data

Hot off the press to your inbox!

virec@va.gov to subscribe

The Researcher's Notebook

How do I identify the bed sections for my cohort?

Introduction

This Researcher's Notebook is intended to provide logical steps for identifying Corporate Data Warehouse (CDW). The bed section is commonly referred to type of inpatient service provided and helps categorize the type of care provided. A patient may move from one specialty to another during the inpatient stay. This notebook outlines various bed section stays a patient experienced during an inpatient stay.

Step 1 | Become Familiar with the Terminology and Data

These are some terms that used in this notebook:

- Specialty – type of inpatient service, or bed section (e.g. Medicine, Surgery)
- BedSection – type of inpatient service, or specialty (e.g., Medicine, Surgery)
- Treating Specialty – subsection of the specialty (e.g. Cardiology, Surgical ICU)
- PTF Code – "Specialty Code" (e.g., 72 = "ALCOHOL DEPENDENCE TRMT UNIT")
- Inpatient stay – complete stay from admission to discharge (made up of 1 or more bed section stays)
- Bed section stay – duration in a particular specialty or bed section
- LOS in Service – length of stay in a specialty or bed section
- VistA 501 Movement – specialty transfer/bed section movements
- VistA 535 Movement – physical transfer/ward transfer movements (e.g. "1 North")

Step 2 | Understand the Logic of the CDW Inpatient (Inpat) Tables

It is first necessary to understand how and when the information about bed section is entered into the various tables found in the inpatient domain. This understanding of the data has been inductively reasoned via the presence of a LosingSpecialtySID in Inpat.Inpatient and Inpat.SpecialtyTransfer.

- Inpatient data is not populated in the Inpat.Inpatient and Inpat.SpecialtyTransfer until the patient is discharged from the hospital (inpatient stay ends). Upon discharge from the last bed section (and thus the hospital) the data will be populated in these CDW tables.

Step 3 | Identify the Tables/Views and Columns Needed

- SPatient.SPatient is used to identify individual patients and eliminate known and probable test patients; the columns used in this process include: PatientSSN, PatientSID and CDWPossibleTestPatientFlag.
- Dim.Specialty is needed to identify the specialty's code and description; the following columns Specialty and PTFCode will be used.

Step 5 | Write SQL Queries

Step 5 provides basic code to identify bed section records of interest.

5.1 Select bed section stays from Inpat.Inpatient (last or only bed section of discharged patients only)

The following SQL query selects bed section stays of interest (in this example bed section code 72, 73, and 74) from the Inpat.Inpatient table. This is done by selecting the appropriate columns from the Inpat.Inpatient

```
--Inpat.SpecialtyTransfer Records
SELECT
    st.InpatientSID,
    st.PatientSID,
    st.AdmitDateTime, -- same as below if bed section stay is also the first bed section stay
    SpecialtyTransferDateTime-DATEADD(DAY, st.LOSInService*-1, st.SpecialtyTransferDateTime),
    -- DATEADD back calculates start
    st.SpecialtyTransferDateTime as SpecialtyTransferDateTimeOut,
    sp.Specialty,
    sp.PTFCode,
    st.LOSInService,
    InpatCensus='I' -- Flag source
INTO [personal schema].sabuseBSinpat501
FROM Inpat.SpecialtyTransfer st
INNER JOIN Dim.Specialty sp
ON (st.LosingSpecialtySID=sp.SpecialtySID) -- The name of PK and FK differ !!!
WHERE (sp.PTFCode in ('72', '73', '74')) and
st.LosingSpecialtySID is not null and
st.LOSInService is not null /* -- ignore rows w/ Treating Specialty change but
no Specialty changes */
```

#7 Getting ready for the new EHR

OSIRES

ORD Strategic Initiative for Research & EHR Synergy

New from VIREC

EHRM Resources

Learn about VA's Cerner transition process and its impacts on VA data users with these new resources:

- [Research & EHR Synergy Cyberseminar Series](#)
- [EHRM & Implications for Data Users web page](#)

[Data Issues Brief](#)



[Research & EHR Synergy
Cyberseminar Series](#)
4th Wednesdays, 12 ET

<https://vaww.virec.research.va.gov/EHRM/Overview-and-Implications.htm>

Electronic Health Record Modernization (EHRM) & Implications for Data Users

Overview

This web page is intended to support a general understanding of [VA's Cerner transition process](#) and its impact on researchers and other VA data users. It provides a high-level summary of the Cerner data environment, and the process VA will use to maintain the availability of enterprise level data during the transition. Check out [VIREC's Research & Electronic Health Record \(EHR\) Synergy Cyberseminar Series](#) or visit the [EHRM & Research SharePoint site](#) for information specific to the Cerner system implementation and research transition activities.

Introduction to the EHRM

The VA signed a contract in 2018 to fully implement Corporation over a ten-year period to address the [Veterans Health Information Systems and Technology Patient Reporting System \(CPRS\)](#) EHR. The contract and facilitate seamless care across all VA facilities Agency by enabling access to a complete health record.

As the nation's largest integrated healthcare system (VHA) provides care for millions of Veterans at more than 1,600 outpatient institutions across the United States. Clinical care information systems, with a highly customized VA EHR and data it comprises has been used to support operations, improve healthcare and health outcomes research projects for decades.

Understanding the Cerner Data Environment

Millennium

Millennium is Cerner's EHR platform and includes administrative data similar to VA's Computerized Health Information Systems and Technology Architecture data for VA's 130 medical-center based networks platform. The change to Cerner Millennium requires restructuring in the Millennium data model.

On This Page

- [Overview](#)
- [Introduction to the EHRM](#)
- [Understanding the Cerner Data Environment](#)
- [Initial VA Data Migration to](#)

Training

Data managers, programmers, analysts and other data users who require data from transitioned sites should attend the weekly Syndicated Data Bits sessions provided by OEHRM. These sessions introduce users to the Cerner Millennium data environment, data syndication processes, and data mapping concepts.

Users interested in attending the sessions should click the [DMM Knowledge Share](#) link to accept the calendar invitation for the series.

[View resources related to accessing and using Syndicated Data.](#)

General EHRM Resources

- [Office of Electronic Health Record Modernization \(OEHRM\) Internet](#)
- [Office of Electronic Health Record Modernization \(OEHRM\) Intranet](#)
- [Cerner Wiki](#) (access requires [CernerCare Account](#))
- [Cerner eLearning Video Library](#) (access requires [CernerCare Account](#))

Key EHRM Terms

Understanding language used in the Cerner environment will help data users navigate the EHR transition.

[View key EHRM terms](#)

Frequently Asked Questions

[+ Expand All](#)

- [+ Where can I find detailed information on VA's data migration and syndication plans?](#)
- [+ When will my VA site Go-Live?](#)
- [+ What VA data will be populated initially into the Millennium Data Environment?](#)
- [+ How are VA data mapped during the migration process?](#)
- [+ How will I access historical data once my site has gone live?](#)
- [+ What are the differences between CDWork, CDWork2, and CDWork3 databases?](#)
- [+ How do I gain access to CDWork2 and CDWork3 for research purposes?](#)
- [+ Where can I learn more about commonly used Cerner terms and acronyms?](#)
- [+ What training presentations are available to support my understanding of Cerner](#)

research related questions about the EHRM process, the use of data originating from VA sites that have transitioned to Cerner?

#8 Requesting Centers for Medicare & Medicaid (CMS) Data for Veterans



VIReC Home

About Us

VA/CMS Data for Research

VHA Data Portal

New Users of VA Data

FAQs

Acronym Lookup

HelpDesk

Report Broken Link

How are we doing?

VIReC INTRANET

Search All VA Web Pages [Open Advanced Search](#)

VA/CMS Data for Research

VA/CMS Data Home
About Us
Updates
Publications
Education
FAQs
Help

What is VA/CMS Data?
VA acquires data from the Centers for Medicare and Medicaid Services (CMS) and United States Renal Data System (USRDS). VIReC provides these "VA/CMS data" at no cost to VA researchers. Using these data in VA research provides a more complete picture of healthcare utilization.
[What's new?](#) Learn about new data available and check out our latest products and services.

CMS & USRDS Data for VA Research

[Learn About the Data](#)
View file descriptions and documentation

- [Medicare](#)
- [Medicaid](#)
- [USRDS](#)
- [Patient Assessment](#)
- [HEDIS](#)
- [MCBS](#)
- [Provider](#)
- [VA/CMS Match Indicator File](#)

[Data Currently Available from VIReC](#)
Check out dataset names, calendar years, and cohorts currently available.

[Cohorts & Identifiers](#)
Explore cohorts and identifiers available for Veterans and Non-Veterans, including the VHA Cohort.

Data Requests & Requirements

[Pre-Request Consultations](#)
A recommended step for researchers who are planning on submitting a request.

[Request Process](#)
Information on requesting data from VIReC, including an overview of the process, forms, and timeline.

[Continuing Use](#)
Outlines requirements for projects that have an active VA/CMS Data Use Agreement.

[Terminating Use](#)
Provides VA/CMS data retention policy and required steps for terminating data use.

[Regulations](#)
Lists regulatory requirements for research use of VA/CMS data.

#8 Securely collecting and managing data within the VA firewall



REDCap™

Log In

Ask for Help | Learning Resources | FAQs | About VA REDCap

You are invited to join us Thursdays from 3-4pm ET for the VA REDCap Hour

VA REDCap Hour is an open question and answer time with members of the VA REDCap support team. We meet every Thursday from 3-4pm Eastern Time. Attendees can use their computer's speakers and microphone or dial into our VANTS line at 1-800-767-1750 Code 89026# for audio access. Join us online at <http://va-eerc-ees.adobeconnect.com/redcap/>

Please log in with your user name and password. If you are having trouble logging in, please contact [VIReC REDCap Helpdesk](#).

Username:

Password:

Learn More:

<http://vaww.virec.research.va.gov/REDCap/Overview.htm>

VIReC INTRANET

Search All VA Web Pages Search [Open Advanced Search](#)

VA INFORMATION RESOURCE CENTER (VIReC)

VIReC Home
 About Us
 VA/CMS Data for Research
 VHA Data Portal
 New Users of VA Data
 FAQs
 Acronym Lookup
 HelpDesk
 Report Broken Link
 How are we doing?

VA Research Electronic Data Capture (REDCap)

[Launch VA REDCap Application](#)

Overview

REDCap was created in 2004 at Vanderbilt University to support data collection for research. VA REDCap is the free, secure VA Intranet version of this application.

Benefits & Features

REDCap allows for easy creation of online databases and surveys without requiring knowledge of programming language. VA REDCap users are able to develop data collection instruments and control how the project may be shared with other users. When survey capability is enabled on an instrument, anyone with access to the VA Intranet may respond to the survey link. Other benefits include data quality control, secure storage, maintenance and sharing of data on the REDCap server, and consistent formatting across all sites with validation and branching/skipping logic.

[View VA REDCap Features](#)

Limitations

Since VA REDCap is a VA Intranet Web application, surveys can only be administered to respondents while logged into the VA Intranet.

VA REDCap is not approved for patient identifiers. If your project uses PII or PHI, work with your local Privacy Officer (PO) and Information Security Officer (ISO) to develop a solution that addresses security concerns in our current computing environment.

VA REDCap has limited data analysis capabilities; however data can easily be exported to other formats suitable for analysis (e.g. SAS or STATA).

Getting Started with VA REDCap

Request an account by filling out a [VA REDCap Ticket](#).

VA REDCap

- Overview
- FAQs
- User Guidelines

Did you know?

VIReC's VA REDCap Learning Resources include links to self-paced learning materials and information on upcoming training events.

General Resources

- Data Access
- Data Sources
- Data Tools
- Data Topics
- Products & Services
- Special Projects

Additional Resources

Quick links for VA data resources

Quick Guide: Resources for Using VA Data

<https://vaww.virec.research.va.gov/Toolkit/QG-Resources-for-Using-VA-Data.pdf> (VA Intranet)

VIReC: <https://vaww.virec.research.va.gov/Index.htm> (VA Intranet)

VIReC Cyberseminars: <https://www.virec.research.va.gov/Resources/Cyberseminars.asp>

VHA Data Portal: <https://vaww.vhadatportal.med.va.gov/Home.aspx> (VA Intranet)

VINCI: <https://vaww.vinci.med.va.gov/vincicentral/> (VA Intranet)

Health Economics Resource Center (HERC): <https://vaww.herc.research.va.gov> (VA Intranet)

CDW: <https://vaww.cdw.va.gov/Pages/CDWHome.aspx> (VA Intranet)

Archived cyberseminar: What can the HSR&D Resource Centers do for you?

https://www.hsr.d.research.va.gov/for_researchers/cyber_seminars/archives/video_archive.cfm?SessionID=1014

Electronic Health Record Modernization *Resources for Researchers*

“EHRM & Research” page on the Research Resource Guide SharePoint

<https://dvagov.sharepoint.com/sites/VHAPugResearch/RRG/Pages/EHRM-Research.aspx>

“EHRM and Implications for Data Users” page on the VIREC website

<https://vaww.virec.research.va.gov/EHRM/Overview-and-Implications.htm>

Data Management and Migration Knowledgebase” on the Data Migration, Management, and Syndication SharePoint

<https://vaww.cdw.va.gov/sites/EHRMDataIntegration/DIRAKnowledgeShare/Pages/DIRAKnowledgeShareHome.aspx>

Syndicated Data Bits - Weekly Webinars

<https://tinyurl.com/y3wgxzu5>

Office of Electronic Health Record Modernization (OEHRM) Intranet site

<https://vaww.ehrm.va.gov/>

Maria Souden, MSI, PhD

Acting Director

VA Information Resource Center

Hines VA Hospital

maria.souden@va.gov

virec@va.gov



Thank you!
Questions?



Database & Methods Cyberseminar Series

Next session:

March 1st at 1 pm Eastern

**Joint Longitudinal Viewer (JLV) and Research,
Pt 1: Getting started**