



CAREWare 101

Administrative Reverse Site Visit (ARSV)

November 16, 2023

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Vision: Healthy Communities, Healthy People



Objectives

- ✓ Summarize the main features and uses of CAREWare
- ✓ Describe the types of agencies that have benefitted from CAREWare
- ✓ Outline recent and future enhancements to CAREWare
- ✓ Provide resources to assist agencies with CAREWare





What Is CAREWare?

A free, browser-based health information system developed originally in 2000 by Health Resources and Services Administration's HIV/AIDS Bureau and now used by over 900 providers of HIV care funded by the Ryan White HIV/AIDS Program (RWHAP)

Allows for the collection of extensive clinical and social service data

Is readily customizable and interoperable with outside data sources

Used for a range of daily clinic, monitoring, quality, and reporting activities





CAREWare History (2000 to 2023)

- Originally built in MS-Access in partnership with JProg and used by 12–20% of providers
- Provided HRSA recipients and providers the ability to perform basic functions focused on their aggregate reporting requirements
- Popular with agencies that either lacked a software application or had paper-based systems that were cumbersome
- Modified significantly in 2003–2004 to include a detailed clinical module to capture longitudinal information
- Upgraded over time to include major enhancements, e.g. performance measure and provider data import (PDI) modules





How CAREWare Supports The Ryan White HIV/AIDS Program (1)

- Primarily used by Ryan White HIV/AIDS Program (RWHAP)
- Produces the following reports required by HRSA HAB:
 - Ryan White HIV AIDS Program Service Report (RSR)
 - AIDS Drug Assistance Program (ADAP) Data Report (ADR)
 - Ending the HIV Epidemic Initiative Triannual Report (EHE)
 - Clinical Quality Measures (CQM) Performance Measures
 ✓ Using the HIVQM Module (Optional Reporting Tool)
- It is the source of more than half of all the client data for the RSR and ADR data





How CAREWare Supports The Ryan White HIV/AIDS Program (2)

- Updated annually so that it remains current with changes to the reporting requirements
- Can be configured to run on simple, stand-alone installations or large networks connecting multiple agencies
- Some users host their own CAREWare servers, though many are now using jProg's optional CAREWare hosting service
- Contains multiple ways to import data, from basic flat, comma-separated value (CSV) files to Health Level 7 (HL7) feeds from commercial labs





Why Chose CAREWare?

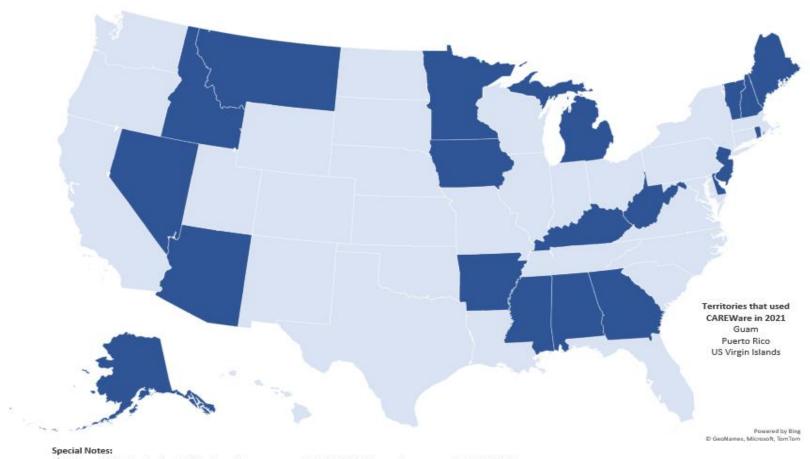
There are many reasons why recipients and providers choose CAREWare:

- It is maintained by HRSA HAB, so it is always RSR, ADR, and EHE Ready
- It can be used by staff with a wide range of skill levels.
- It Includes:
 - custom fields
 - custom reports
 - custom performance measures
 - custom aggregate reports for trend analysis
- Users can import data from various sources
- It allows providers to secure and control user access
- HRSA will not charge you to use CAREWare



ADAPs Use of CAREWare (2021)





- 1) Idaho and Montana both submitted two files, one generated with CAREWare and one generated with TRAX.
- 2) This map reflects which ADAPs submitted a file generated by CAREWare. There may be ADAPs using CAREWare for data collection or other purposes, but use a different system/method to create the ADR CLD file.



ADAPs Use of CAREWare (2021) (2)

ADR Client-level Data XML Files in the 2021 ADR

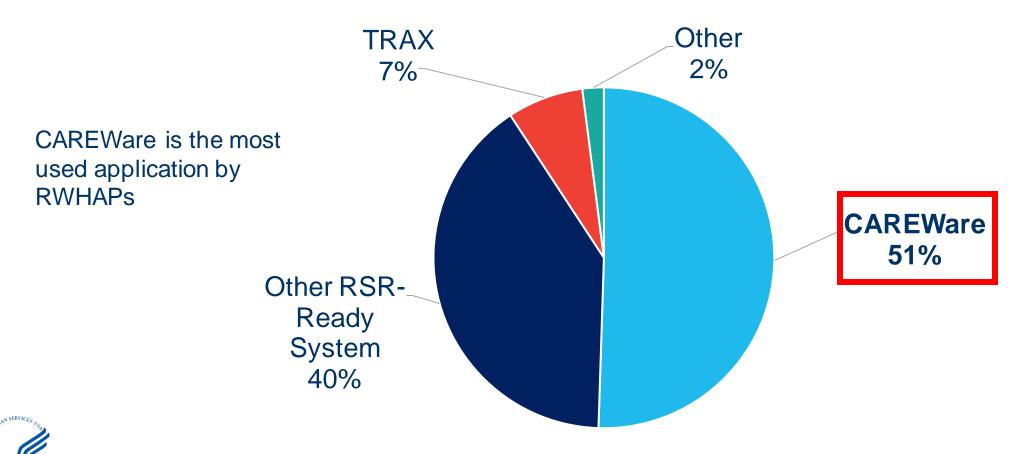
ADR-Ready System	ADAPs	Percent (54 ADAPs)
CAREWare	23	42.59%
TRAX	20	37.04%
Provide Enterprise	5	9.26%
SCOUT	2	3.70%
Rx-REX	1	1.85%
eCOMPASS	3	5.56%
NIC - WI	1	1.85%
Maven-SDEDSS	1	1.85%
Consilience	1	1.85%





CAREWare Popularity Among Recipients/Providers

RSR Client-level Data XML Files in 2021





2021 CAREWare Survey





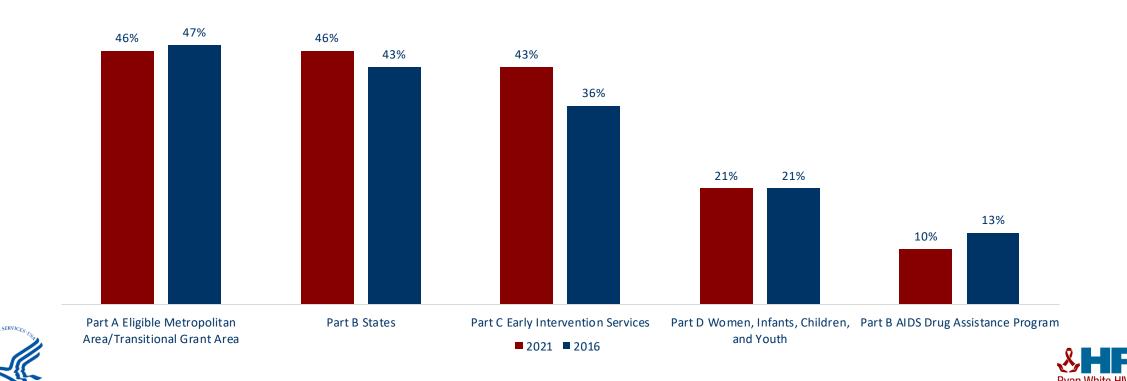
2021 CAREWare Satisfaction Survey

- Survey launched on April 6, 2021 and closed on May 5, 2021
- Data collection occurred via a secure online survey with invitations delivered via email
- Survey invitations were sent to 615 CAREWare users
 - All CAREWare users at the time of the survey were eligible to participate
- Survey yielded 159 completed surveys for a response rate of 26%
- Surveyors queried users about CAREWare and its features
- Users were asked to provide detailed feedback and suggestions for enhancements



Survey Respondents By Grant Funding Type (2021 Survey)

 The distribution of the types of grants received by the agencies represented in the respondent group was similar in 2016 and 2021 except for a somewhat higher percentage of Part C Early Intervention Services grants.



2021 CAREWare Satisfaction Survey Key Findings

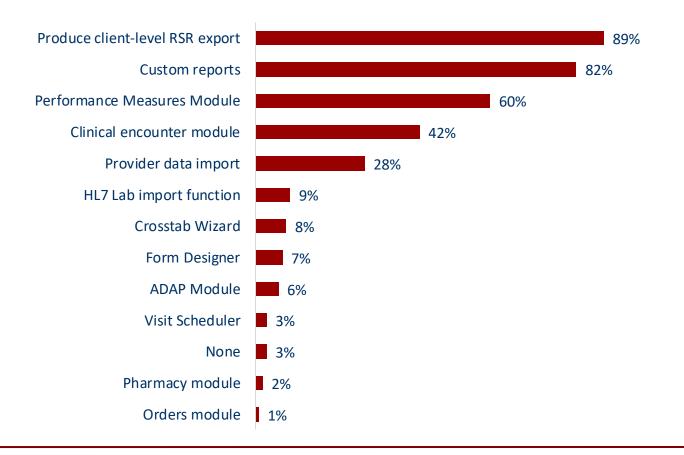
- 75% of users say they use CAREWare daily
- More than nine in ten (93%) of those who use other software use CAREWare for managing clinical information
- 85% of respondents reported using CAREWare for more than 5 years
- 92% reported a high likelihood of continuing to use CAREWare one year from the date of the survey
- 87% of respondents reported high satisfaction with CAREWare features and Helpdesk Support
- Users reported a similar or better experience when comparing CAREWare 6 to CAREWare 5, which is notable because changes in technology typically result in a temporary decline in satisfaction





CAREWare Features Mostly Used (2021 Report Survey)

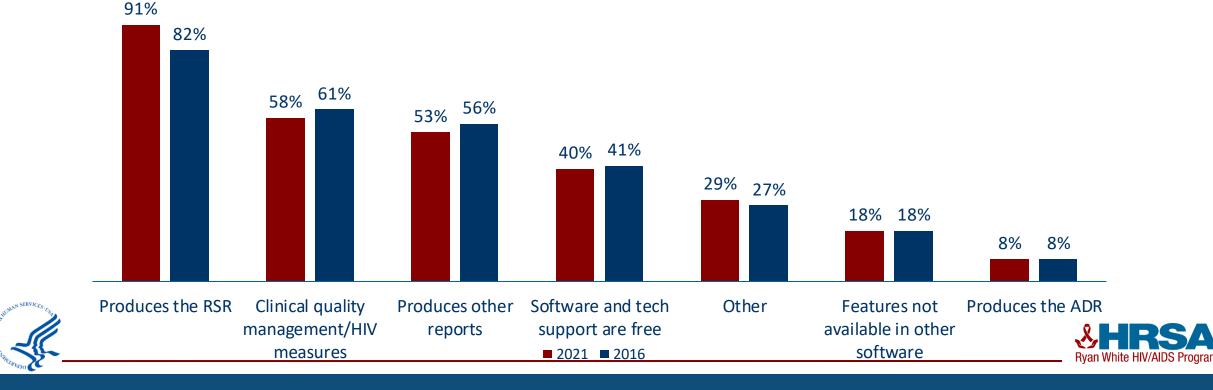
Among 2021 respondents, the CAREWare feature most commonly used is the one that produces client-level RSR exports (89%) followed by custom reports (82%).





Reasons for Using CAREWare (2021 Survey)

- Nine in ten (91%) 2021 respondents say they choose to use CAREWare because it produces the Ryan White HIV/AIDS Program Services Report.
- More than half of 2021 respondents choose to use CAREWare because it provides clinical quality management/HIV measures (58%) and/or because it produces other reports (e.g. custom reports, financial, HOPWA) (53%).



CAREWare Features





CAREWare Features (cont.)

Data Imports and Interoperability:

- Reads HL7 formatted laboratory data from commercial labs and electronic imports of admission, discharge, and transfer feeds
- A provider data import module that covers all fields in CAREWare
- Data translation module enabling import of flat, Excel, or comma-separated value format (CSV)-formatted files

Customization:

- Custom fields of data throughout the application
- The ability to attach scanned documents or image files (photographs) to specific clients

Use of Standard Codes:

Employs standard code sets including ICD-10 and National Drug Code (NDC)





CAREWare 6 Updates

- CAREWare was fully updated in 2018 to a browser-based application with a robust SQL
 Server database backend
- CAREWare has been overhauled with an entirely new user interface that runs in any internet browser (except for Internet Explorer which does not fully support HTML 5).
 - Design change that performs more like a web application than previous versions of CAREWare
- Version 6 includes all of the same functionality as Version 5, plus some additional features, and uses the same underlying SQL Server database.

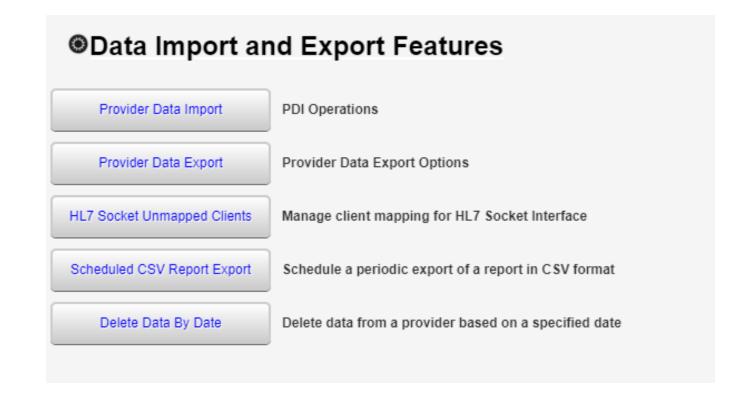




Importing Into CAREWare

CAREWare 6 allows for various files to be imported directly into CAREWare including:

- Comma-Separated Value File (CSV) matching CAREWare specifications
- Data Translation Module (DTM) File
- Health Level Seven File (HL7)
- SQL Provider Data Import (PDI)







Client Information

of client information, such as demographics, clinical data, and services. The Personal Information screen to the right is alerting the user that this client's Poverty Level information is out of date.



Kevin's Clinic > Ball, Abigail (Birthdate: 1/1/1990, Last service: 2/14/2023)



O	Find Client > Search Results > View Details > Demographics > Personal Info	
Customize	Save Cancel	r
Client Summary Demographics 2023 RSR: 6 issues	Personal Info	
2022 RSR: 0 issues Client Report Encounter Report	First Name: Abigail Middle Name:	Go To Top
Drug Payments	Last Name: Ball	
Services Annual Review	Preferred Name:	
Case Notes	Preferred Language: Estonian	
Custom Forms	Gender: Female	
Vital Signs	Date of Birth: 01/01/1990	
Hospital Admissions Medications	The second secon	
Labs	DOB Estimated?:	
Screenings	Sex At Birth: Female	
Screening Labs	URN: AIBL0101902B	
Immunizations	Encrypted URN: NPey0QLgl	
Diagnoses		
Sharing Requests	Encrypted UCI: 92F4E3D3EE2E5ED6C09A5654F0B79777DE87E8FCB	
Referrals	Client ID: 556	
Relations	LastService: 2/14/2023	
Counseling and Testing Pregnancy History	Last Poverty Level: 03/06/2020 No Poverty Level Assessment entered within the	
Orders	last six monurs.	
Custom Subform	StateNo (eHARS):	
Hobbies	MRN:	Go To Bottom
Client Needs (default custom subform)	TestCheckbox:	_
Assessment	~	_

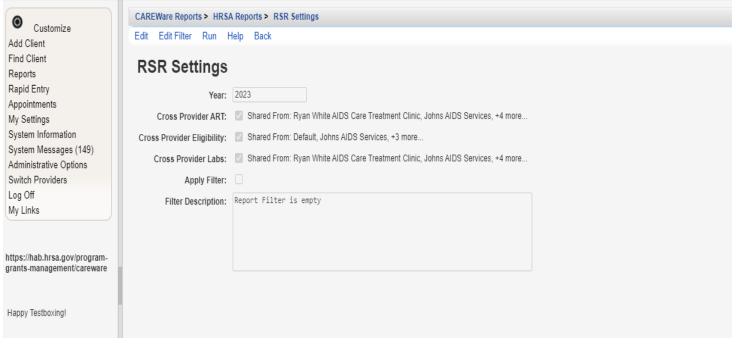


RSR and ADR

The screens where users run and analyze the RSR and ADR—the main reports required by HRSA HAB—are similar to each other. Users get these reports running with a few mouse clicks, and CAREWare does the rest. CAREWare also provides tools for viewing the data from the XML files and for checking validation issues before uploading.



JKAPRAKU > Kevin's Clinic







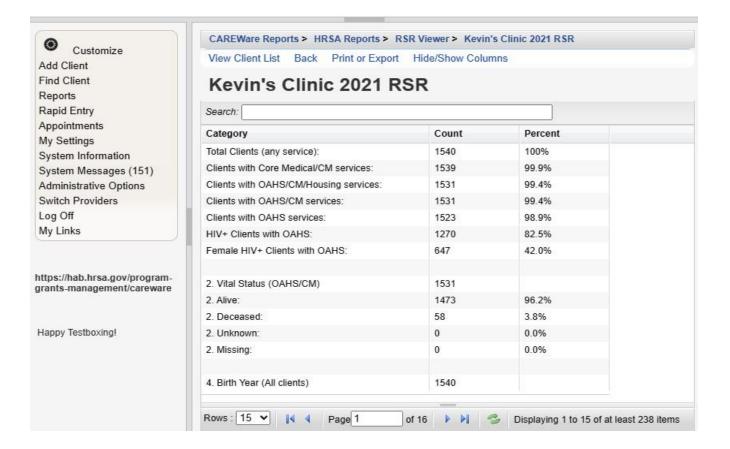
RSR and ADR (continued)



bill > Kevin's Clinic



RSR and ADR screens are very similar







Examples of CAREWare Reports

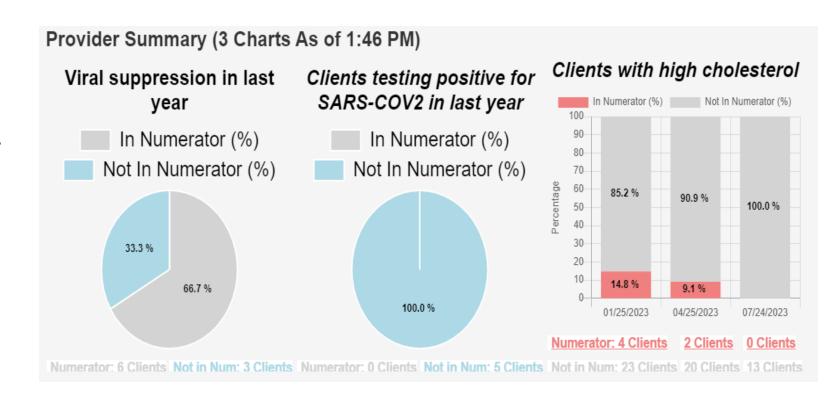




Provider Summaries

Upon login, CAREWare will show important provider rates for any performance measures

- Shows how rates change over time
- Provides hyperlinks to clients who do and don't meet the measure
- Design flexibility allows users to select colors, fonts, etc.

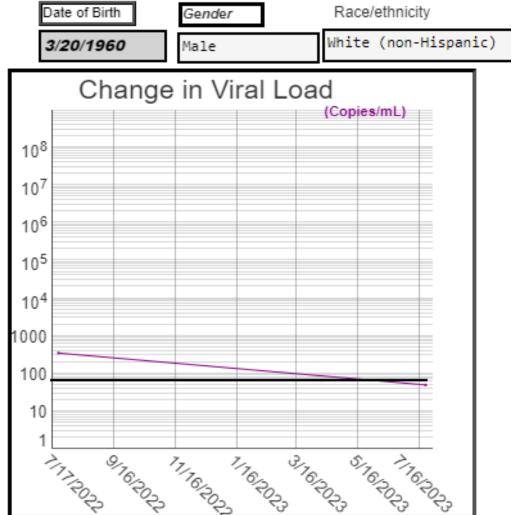






Client Summaries

- Upon login, CAREWare will show important changes over time for labs/vital signs of interest
- Design flexibility allows users to
 - change date range,
 - add demographic info;
 - select colors, fonts, etc.







Custom Reports

CAREWare's powerful custom report engine offers users diverse methods for crunching numbers.

The following report shows the last Viral Load result > 200 for all clients who had such a result.

Last VL over 200

Data Scope: Kevin's Clinic

Report Start Date: 01/01/2021
Report End Date: 12/31/2021

Report Criteria: Last Quantitative Lab Value (Lab = Viral Load Date Range

Between 32 AND 0 months before the end date or as of date (5/1/2019 And 12/31/2021). AND Cross-Provider = No OR Lab Code Criterion Is Not Set) >= 200 AND Gender = Female OR Last Quantitative Lab Value (Lab = Viral Load Date Range Between 365 AND 0 days before the end date

or as of date (1/1/2021 And 12/31/2021). AND Cross-Provider = No OR Lab Code Criterion Is Not Set) >= 400

AND Gender = Male

Sharing Options: Clinical records

Name:	Gender:	Race/Ethnicity:	Last Viral Load in
			Year:
Maendsel, Buster	Female	White (non-Hispanic)	200-999
Endingtest, Blair	Female	Am. Indian/Alaska Native	200-999
Fisher, Caroline	Male	Hispanic	>= 1000
Ordiir, Blaine	Female	Black or African-American	200-999
Lithdel, Collin	Female	Not Specified	200-999
Tests, Sue	Female	Hispanic	200-999
Runningtest, Beau	Male	Black or African-American	>= 1000
Aldalinde, Buford	Female	Hispanic	200-999





Canned Reports

Financial Report

Monday, January 1, 1990 through Monday, July 24, 2023

CAREWare offers many premade, or "canned," reports. Perhaps the most popular canned report is the Financial Report, which details expenditures by service type.

Report Criteria:

Providers: Ryan White AIDS Care Treatment Clinic

Funding Sources: All Sources

Group By Providers: False
Include Subservice Detail: False

Receipts In Period: False

Ryan White AIDS Care Treatment Clinic

Early Intervention Services	Clients:	Units:	Total:	Amount Received:	Not Received:
Early Intervention ServicesTotals:	3	9	\$0.00	\$0.00	\$0.00
EHE Initiative Services	Clients:	Units:	Total:	Amount Received:	Not Received:
EHE Initiative ServicesTotals:	20	25	\$0.00	\$0.00	\$0.00
Emergency Financial Assistance	Clients:	Units:	Total:	Amount Received:	Not Received:
Emergency Financial AssistanceTotals:	1	1	\$0.00	\$0.00	\$0.00
Food Bank/Home-Delivered Meals	Clients:	Units:	Total:	Amount Received:	Not Received:
Food Bank/Home-Delivered MealsTotals:	13	14	\$80.00	\$0.00	\$80.00





Crosstab Reports

- Crosstab Reports allow you to quickly obtain the counts of clients for specific criteria.
 - For example, you may need to report the number of clients you are serving cross-classified by race/ethnicity and gender, or by HIV status and CD4 count. The crosstab wizard allows you to generate client counts.
- Crosstabs have a row, column, and, if specified, a strata field.

CAI Housing Data - Race and Ethnicity (Race/Ethnicity by Housing Arr - CLD)

Data Scope: Ryan White AIDS Care Treatment Clinic

Report Start Date: 06/01/2022
Report End Date: 07/24/2023
Race/Ethnicity by Housing Arr - CLD

Race/Ethnicity:	Total:	<u>Col. %:</u>	Not Specified:	Stable/Permanent:	Temporary:	Unstable:
Am. Indian/Alaska Native	2	4.9	2 (100.0%)	0	0	0
Asian	1	2.4	0	0	1 (100.0%)	0
Black or African- American	3	7.3	3 (100.0%)	0	0	0
Hispanic	17	41.5	9 (52.9%)	4 (23.5%)	4 (23.5%)	0
More than one race	4	9.8	1 (25.0%)	0	2 (50.0%)	1 (25.0%)
Pacific Islander	3	7.3	3 (100.0%)	0	0	0
White (non-Hispanic)	11	26.8	10 (90.9%)	1 (9.1%)	0	0
Total:	41	100.0	28 (68.3%)	5 (12.2%)	7 (17.1%)	1 (2.4%)

Number of Records: 8

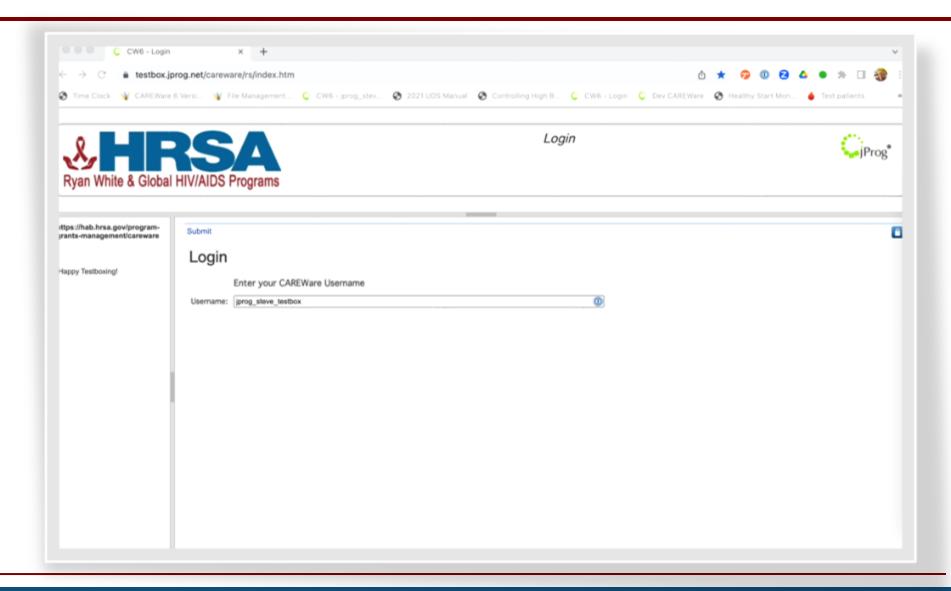
(Count is unduplicated across providers)





^{* -} Restricted Field

CAREWare Reports Demonstration





CAREWare Enhancements





ADAP Financial Report

- New features will summarize financial details of ADAP drug payments within a reporting period
- The form filters will now contain:
 - Date From the date that a drug payment record must be on or after for inclusion
 - Date Through the date that a drug payment record must be on or before for inclusion
 - Dispenser Filter the set of dispenser(s) to filter drug payment records for. If no filter is specified, drug payments that meet the rest of the criteria will be included
 - Funding Sources Filter the set of funding source(s) to filter drug payment records for. If no filter is specified, drug payments that meet the rest of the criteria will be included



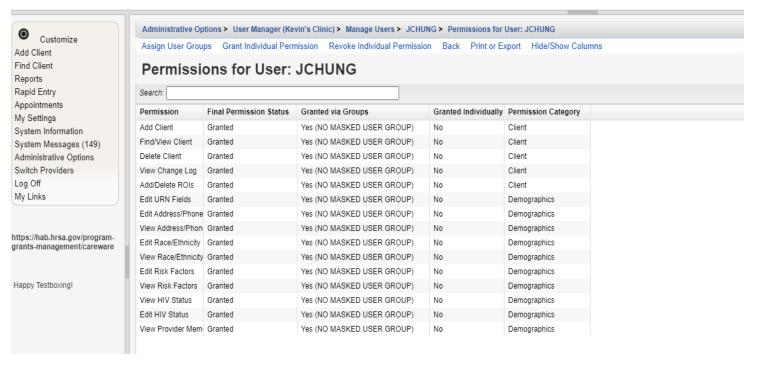


Provider User Manager

CAREWare is designed to accommodate multiple service providers on a single server, and data for each provider can be kept separate or shared by varying degrees. Users can belong to a single provider or many, and hundreds of individual permissions govern each user's access to various parts of CAREWare.



JKAPRAKU > Kevin's Clinic



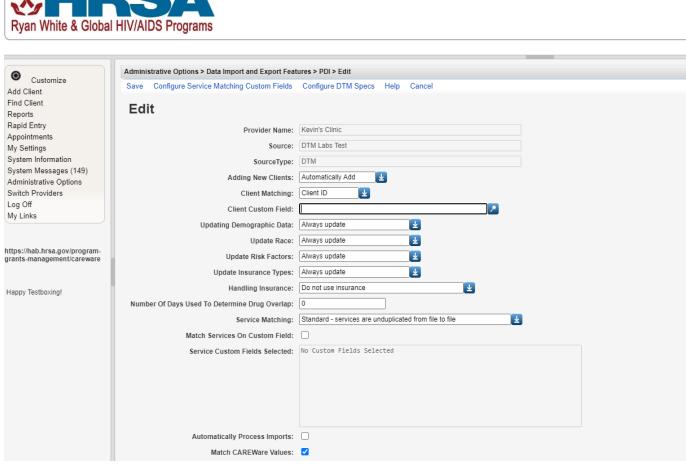




Current Provider Data Import (PDI)

Provider Data Import (PDI) is the primary method for importing data into CAREWare.

The configuration screen shows some of the options users have for deciding how incoming data interacts with existing data.







JKAPRAKU > Kevin's Clinic

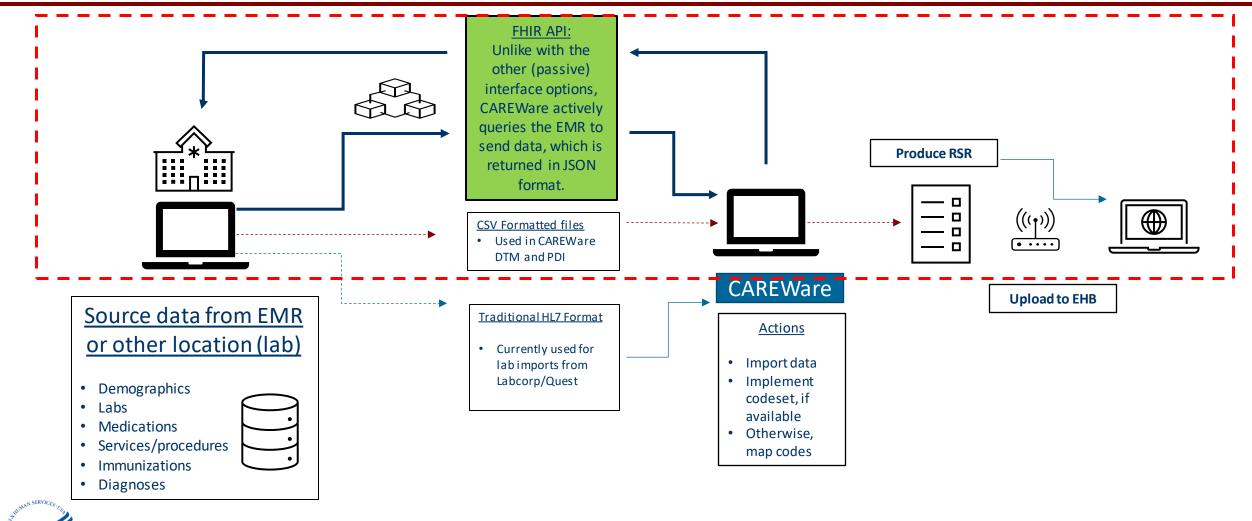
CAREWare Interoperability Enhancement

- CAREWare, now its third decade of development, has kept apace with features to accommodate data imports from outside sources, including Electronic Medical Records (EMRs), HIV Surveillance systems, and commercial labs
- Federal efforts over the last decade or so have sought to standardize -- and thus make more efficient— the movement of healthcare data across software platforms
- The latest and most significant development, outlined in the 21st Century Cures Act, and promulgated by the Office of the National Coordinator for HIT, is the promotion of a Fast Healthcare Interoperability Resources (FHIR) Application Programming Interface (API)





CAREWare FHIR API Data Flow Diagram

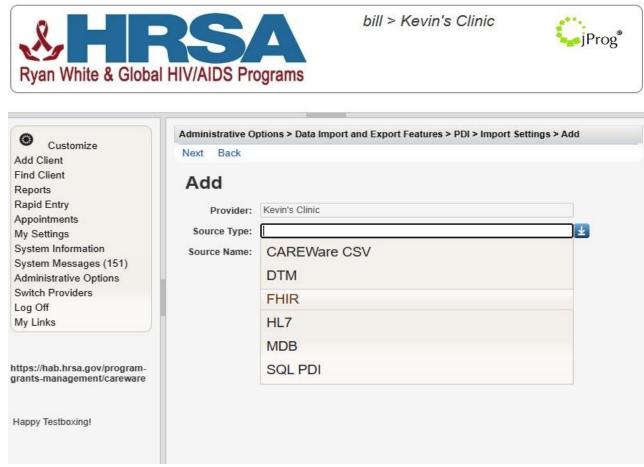




Fast Healthcare Interoperability Resources (FHIR)

For those clinics that use a commercial EMR (e.g. EPIC, GE Centricity, eClinicalWorks) and also CAREWare, a FHIR API could greatly:

- Enhance the ability to move RSRrelated (and other) data without hand-entry
- Eliminate duplicate data entry
- Improve data quality
- Ensure CAREWare data are up-todate





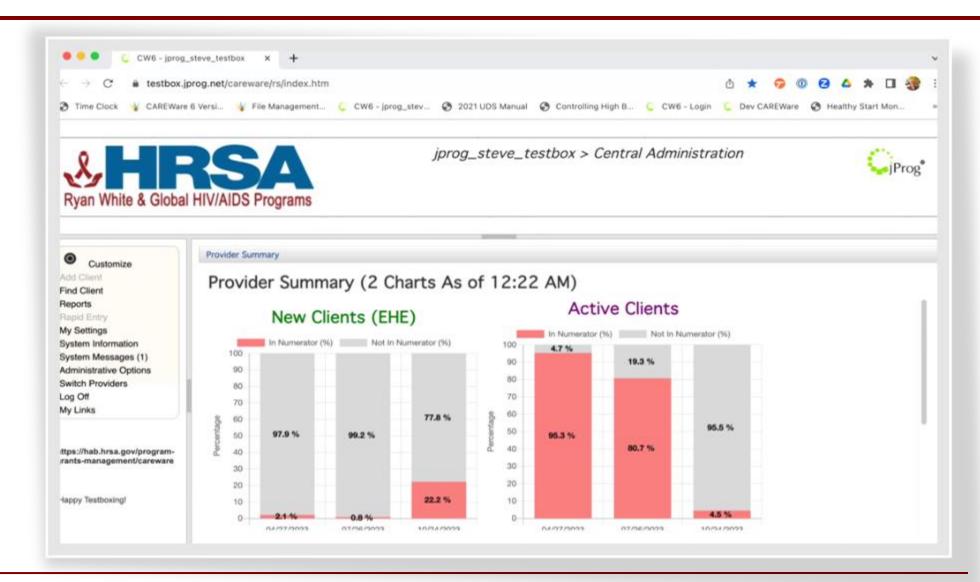
Benefits of FHIR Recap

- FHIR will help eliminate manual entry and duplicate data entry of important clinical and service information in the electronic medical record
- FHIR applies modern methods of *authorizing* access to EMRs, and *structuring* the data in a standardized format (regardless of the data source) to enable efficient imports, either on individual patient-by-patient basis, or in "bulk," for an entire population
- In short, FHIR defines the *how* to obtain health information, and the content and structure of that data, independent of the source





CAREWare Import Demonstration







CAREWare Available Resources





CAREWare Features in Focus Webinars

Webinar series, hosted by HRSA/HAB, on various features of CAREWare, focusing on the software's elements and how to use them.

- Some recent webinars include:
 - CAREWare Features in Focus RSR Client Issue Viewer
 - CAREWare Features in Focus Basics of Building Client Reports
 - <u>CAREWare Features in Focus Advanced Custom Reports and Performance Measures</u>
 - <u>CAREWare Features in Focus PDI and PDE New Build Features</u>
 - CAREWare Features in Focus A Look at the FHIR API





TA Resources

Resources	Contact
CAREWare on TargetHIV	CAREWare TargetHIV
Listserv	CAREWARE@list.nih.gov
CAREWare Helpdesk Contact	877-294-3571
CAREWare Helpdesk Email	cwhelp@jprog.com
НарруГох	https://jprog.happyfox.com/kb/
CAREWare Wiki	https://jprog.com/wiki/
CAREWare "Features in Focus" webinars	https://targethiv.org/library/careware- features-focus
CAREWare Software Releases, User Guides, Etc.	https://ryanwhite.hrsa.gov/grants/manage/careware



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Learn more about our program at our new website: www.ryanwhite.hrsa.gov



Sign up for the Ryan White HIV/AIDS Program Listserv: https://public.govdelivery.com/accounts/USHHSHRSA/signup/29907





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