



CAREWare Features in Focus:

Importing data through a Fast Healthcare Interoperability Resource (FHIR)

Application programming interface (API)

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What is a FHIR API?

- From the Office of the National Coordinator (ONC) for HIT:

FHIR stands for Fast Healthcare Interoperability Resources, a next-generation interoperability standard created by the standards development organization Health Level 7 (HL7). FHIR is designed to enable health data, including clinical and administrative data, to be quickly and efficiently exchanged.

- Uses up-to-date authentication security and encryption standards to make the “hand shake” between the EMR (the data source/server) and the client (the receiver of the data, such as CAREWare)
- Allows for the handling of any number of standardized codesets such as ICD-10 (diagnoses), RxNorm (medications), SNOMED-CT (procedures/services), LOINC (lab tests)

Why use FHIR?

- Direct connection to EMR eliminates need to create intermediary CSV files; greatly reduces hand and duplicate data entry
- Standardized codes for demographics, labs, medications, and services that are routinely used in EMRs will be automatically mapped into CAREWare in the FHIR transmission.

HL7.org/fhir



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Home

This page is part of the FHIR Specification (v4.3.0: R4B - STU). This is the current published version. For a full list of available versions, see the [FHIR Versions](#) page.

Welcome to FHIR®

FHIR is a standard for health care data exchange, published by HL7®. This is Release R4B - see the [explanation about R4B](#).

First time here?

See the [executive summary](#), the [developer's introduction](#), [clinical introduction](#), or [architect's introduction](#), and then the [FHIR overview / roadmap & Timelines](#). See also the [open license](#) (and don't miss the full [Table of Contents](#) and the [Community Credits](#) or you can search this specification).

See also the [Known Issues](#) that are not yet addressed.

Level 1 Basic framework on which the specification is built



Foundation

Base Documentation, XML, JSON, Data Types, Extensions

Level 2 Supporting implementation and binding to external specifications



Implementer Support

Downloads,
Version Mgmt,
Use Cases,
Testing



Security & Privacy

Security,
Consent,
Provenance,
AuditEvent



Conformance

StructureDefinition,
CapabilityStatement,
ImplementationGuide,
Profiling



Terminology

CodeSystem,
ValueSet,
ConceptMap,
Terminology Svc



Exchange

REST API + Search
Documents
Messaging
Services
Databases

Level 3 Linking to real world concepts in the healthcare system



Administration

Patient, Practitioner, CareTeam, Device, Organization, Location, Healthcare Service

Level 4 Record-keeping and Data Exchange for the healthcare process



Clinical

Allergy, Problem,
Procedure,
CarePlan/Goal,
ServiceRequest,
Family History,
RiskAssessment,



Diagnostics

Observation,
Report, Specimen,
ImagingStudy,
Genomics,
Specimen,
ImagingStudy, etc.



Medications

Medication,
Request, Dispense,
Administration,
Statement,
Immunization, etc.



Workflow

Introduction +
Task, Appointment,
Schedule, Referral,
PlanDefinition, etc



Financial

Claim, Account,
Invoice, ChargeItem,
Coverage + Eligibility
Request & Response,
ExplanationOfBenefit,
etc.

FHIR API Process in CAREWare

- ***Connect to EMR:***

CAREWare will create a FHIR app called "CAREWare RSR Connector" on your EMR's FHIR portal. You can check with the CAREWare helpdesk if we have made one yet for your EMR

- ***Request data*** for specific patients/clients and specific information on those individuals (using some client id or perhaps in bulk (e.g. all HIV positive clients with a visit in the last year))

- ***Data are converted*** into a PDI formatted file and mapped into CAREWare

CAREWare Demo!!

- Using a connection to the EPIC “sandbox” (test data only!)

The screenshot shows the CAREWare user interface. At the top, there is a navigation bar with the following items: a blue 'OPEN Epic' badge, 'FHIR', 'API Specifications', 'Build Apps' (highlighted in red), and 'Documentation' with a dropdown arrow. Below the navigation bar, the main content area is titled 'My Apps'. It features a search bar with the placeholder text 'Search' and a magnifying glass icon. To the right of the search bar is a checkbox labeled 'Include Inactive Apps'. Further right, it says 'Showing 1 of 1'. Below the search bar is a '+ Create' button. The main content area displays one application card for 'CAREWare RSR Connector', which has a pink icon and a blue 'Draft' status tag.

How do you activate FHIR in your EMR?

- Depends on...
 - Your clinic's administrative approval process
 - Potential costs to activate the FHIR service in your EMR
 - The particular EMR in use (this may take time to activate and may differ by EMR).
- The CAREWare PDI FHIR datasource is scheduled for beta testing in January of 2023 and production in June.

Limitations/Issues

- What proportion of RSR data is available in the EMR?
 - Variables including federal poverty level, housing status may not be recorded at all or with any consistency
- Outstanding work required to best understand how to map clinical encounters as recorded in the EMR with Ryan White eligible service categories
- Will require ongoing administrative and technical oversight

FHIR resource links

<https://www.healthit.gov/topic/standards-technology/standards/fhir-fact-sheets>

<http://www.hl7.org/fhir/>

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