

DYNAMIC FHIR IGNITING INTEROPERABILITY

The Dynamic FHIR API makes EHR patient data readily available and ignites interoperability using the HL7® FHIR® standard. FHIR is based on common web technology using a RESTful API protocol.

An API with access to patient data is required for 2015 Cures Edition "Base EHR" certification. For MIPS, providers must have 2015 Edition Cures Update software Certified for:

- 170.315(g)(7) : App access - patient selection
- 170.315(g)(9) : Application access - all data
- 170.315(g)(10): Bulk FHIR (Flat FHIR)

A FHIR API is mandatory to maximize MIPS/ Quality Payment Program scoring under Promoting Interoperability. It is needed for "Provide Patient Access" within "Patient Electronic Access to Health Information" .

Features:

- True FHIR DataStore serves as your interoperability hub
- Delivers XML or JSON to API client of your choice
- Retrieves all USCDI data or a class of data (e.g. clinical notes, problems, labs)
- Dynamic FHIR API leverages FHIR R4 and SMART on FHIR Core Capabilities:
 - ⇒ Launch Standalone Patient
 - ⇒ LaunchEHR Practitioner
 - ⇒ Bulk FHIR with Backend Service Authorization

New User Registration

Please enter your credentials to Register

First Name

Last Name

Date Of Birth

Special Key

Patient ID

Dynamic FHIR User Registration

Easy access

Through a browser-based user interface, the Dynamic FHIR API offers a user-friendly, secure path to activation. After one-time activation, patient data is available without signing into a web portal. Behind-the-scenes, OAuth 2.0 provides secure authorization.

Cooperative development using the API will enable patients to consolidate data in a single location without the hassle of multiple logins and limitations of data as presented in a user portal.

Health Summary Patient: Alice Jones Newman
 Previous Name: Alice
 D.O.B: May 1, 1970 Sex: Female

Treatment plan

Code	Name	CodeSystem	Date	Narrative
36843-5	Chest X-Ray	LOINC	2015-08-23	Get a Chest X-Ray done on 8/23/2015 showing the Lower Respiratory Tract Structure.
93010	EKG	CPT	2015-06-23	Get an EKG done on 6/23/2015.
284215	Clindamycin 300mg	RXNORM	2015-06-23	Take Clindamycin 300mg three times a day as needed if pain does not subside. Schedule follow on visit with Neighborhood Physicians Practice on 7/1/2015.
11429006	Consultation	SNOMED-CT	2015-07-01	Neighborhood Physicians Practice on 7/1/2015.
24367-6	Urinalysis macro (spic) panel	LOINC	2015-06-29	

Assessments

- The patient was found to have fever and Dr Davis is suspecting Anemia based on the patient history. So Dr Davis asked the patient to closely monitor the temperature and blood pressure and get admitted to Community Health Hospitals if the fever does not subside within a day.

Mental status
 Status: Amnesia 2005-01-05

Medical equipment
 1. Cardiac resynchronization therapy implantable pacemaker (0100643169007222(171)160128(21)BLC200461H FDA

Health concerns
 Concern: Chronically ill 181901003 completed
 HealthCare Concerns refer to underlying clinical facts:
 Documented Hypertension problem
 Documented Hypothyroidism problem

Functional status
 Condition: Dependence on Care 2005-05-01

Reason for referral
 Ms Alice Newman is being referred to Community Health Hospitals inpatient facility because of the high fever noticed and suspected Anemia.

CCDA v2.1 as shown in ConnectEHR

FHIR Resources from any v2.1 CCDA

FHIR resources are created in DHIT's server from the latest ONC-certified CCDA r2.1. FHIR resources are mapped to sections in USCDI and reachable by URL. Health IT applications can make read-only data requests for patient health information extracted from your CCDA. CCDAs can be generated directly from your EMR or received using protocols such as Direct or Web Services.

FHIR Client Test Application

Filter Date From: 01/01/2017 Date To: 07/31/2017

```

<Bundle xmlns="http://hl7.org/fhir">
  <id value="359b7372-2d22-4bb2-93cb-d97888dec759" />
  <entry>
    <fullUrl value="/fhir/medication/" />
    <resource>
      <MedicationStatement>
        <id value="rx-1" />
        <medicationCodeableConcept>
          <coding>
            <system value="2.16.840.1.113883.6.88" />
            <code value="309990" />
            <display value="RXNORM" />
          </coding>
          <text value="Ceftriaxone 100 MG/ML " />
        </medicationCodeableConcept>
        <effectivePeriod>
          <start value="2015-06-22" />
          <end value="2015-06-30" />
        </effectivePeriod>
      </MedicationStatement>
    </resource>
  </entry>
  <entry>
    <fullUrl value="/fhir/medication/" />
    <resource>
      <MedicationStatement>
        <id value="rx-2" />
        <medicationCodeableConcept>
  
```

XML Output in DHIT Application

XML or JSON to any API Client

Developers can use a wide range of API clients, from PostMan© to DHIT's own display client, to deliver patient data. Requests are made against Dynamic FHIR API for all patient data and subsets by date range and section. The FHIR Server handles Errors & has valid Exception methods providing an HTTP status code and Meaningful messages in both JSON/XML format. DHIT's FHIR API Client (shown at left) provides a clean section-mapped view, with a full listing of FHIR resources available.

