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Product Name and Version : EHR Your Way Version: 9.2.0.0 INTRODUCTION

This document outlines the complete set of steps required for an application to securely access Protected Health Information (PHI) using an open, standards-based API.

The API exposes clinical data using FHIR® (Fast Healthcare Interoperability Resources), a widely adopted HL7 standard designed to support seamless exchange of healthcare information.

FHIR leverages modern web technologies and follows a RESTful architecture, where every clinical resource—such as Patient, Encounter, Observation, and MedicationRequest—is accessible via a predictable, fully qualified URL. This enables client applications to retrieve and interact with health data using standard HTTP methods.

To ensure secure and compliant access, this document also details the use of OAuth 2.0, the industry-standard protocol for authorization.

OAuth 2.0 enables client applications to:

- Authenticate securely

- Request specific, granular permissions

- Obtain and use access tokens

- Integrate with FHIR servers while protecting patient privacy

Together, FHIR and OAuth 2.0 form the foundation for interoperable, scalable, and secure health data exchange.

This guide will walk you through the full process required to implement these standards in alignment with regulatory expectations, including ONC (g)(10) certification requirements.

We follow Smart-On-FHIR authentication (OAuth2) and authorization
(Ref. <https://hl7.org/fhir/smart-app-launch/STU2/>)

FHIR Endpoints

Note: Production and Test Server endpoints are subject to change.

Production Endpoint: <https://ehrfhir.ehryourway.com/api/v1>

Test Server Endpoint: <https://ehrfhirdev.ehryourway.com/api/v1>

Types of Smart-On-FHIR applications

1. Standalone App (Patient-Facing SMART on FHIR App)

A standalone application operates as a confidential SMART on FHIR client that is launched independently of the EHR. It initiates its own authentication flow and receives:

- Patient context (the specific patient whose data it may

- access) A refresh token for long-lived access

- An OpenID Connect (OIDC) ID token for user identity and session validation

This flow is typically used by mobile/desktop patient apps or third-party consumer apps.

2. EHR-Embedded App (Provider-Facing SMART on FHIR App)

An EHR-embedded application is launched from within the EHR user interface using the SMART on FHIR "EHR Launch" sequence. The EHR passes:

- Practitioner context

- Encounter context (if applicable) Launch

- identifier for context lookup

The app must demonstrate the ability to handle this launch workflow, obtain authorization, and access FHIR resources based on the authenticated user.

3. SMART Backend Services App (System-to-System, Multi-Patient Access)

A SMART Backend Services App is a non-interactive, server-to-server application with no user interface. It is authorized at the system level, not by an individual end-user, and is typically used to: Perform bulk FHIR export for multiple patients Retrieve datasets for analytics, reporting, population health, or regulatory workflows Access Group-level or entire patient-population data Authentication is performed using JWT-based client credentials (private key → signed JWT → token issued), enabling multi-patient authorization as required for Bulk FHIR APIs.

Types of Authentications supported

1. SMART Standalone Launch (Authorization Code + PKCE): Used by patient-facing or provider-facing apps that launch independently and require user login, returning an access token, refresh token, and OIDC ID token.
2. SMART EHR Launch (Authorization Code + PKCE with Context): Used by apps launched from within the EHR, where the EHR supplies patient, encounter, or practitioner context during authorization.
3. SMART Backend Services (JWT-Based Client Credentials): A system-level, no-UI authentication method for server-to-server access, enabling multi-patient and bulk FHIR operations using a signed JWT to obtain an access token.

Steps for Smart App Launch

1. Client App Registration
2. Retrieve .well-known/smart-configuration
3. Obtain authorization code
4. Obtain access token
5. Access FHIR API
6. Refresh Token to obtain new access token

Client APP Registration

Before a SMART app can run against an EHR, the app must be registered with that EHR's authorization service. We are using OAuth 2.0 Client Registration.

Below mentioned is the link for client app registration <https://ehyourway.com/3rd-party-app-registration.html>

Client App Request process

- Third-party application must sign the *API Subscription Agreement* with following details
 - The app name
 - The necessary APIs / Scopes
 - Any redirect URIs
 - Launch_URL (optional)
 - URL to JWK Set (Only for apps supporting asymmetric client authentication).
- The application is created by the EHR admin after confirming the app's registration parameters and communicates a client_id to the app.
 - FHIR APIs (of any supported version) listed within the USCDI v3 core data set will be supported
 - Only reads data from FHIR server

Retrieve .well-known/smart-configuration

In order to obtain launch context and request authorization to access FHIR resources, the app discovers the EHR FHIR server's SMART configuration metadata, including OAuth authorization_endpoint and token_endpoint URLs.

FHIR server makes SMART configuration available from well-known endpoint. You can get Authorization endpoint and token endpoint.

Request

GET 200 [https://\[FHIRBaseURL\]/.well-known/smart-configuration](https://[FHIRBaseURL]/.well-known/smart-configuration)

Response

```
{
  "authorization_endpoint":
  "https://ehrfhirdev.ehryourway.com/api/v1/smart/authorize",
  "token_endpoint":
  "https://ehrfhirdev.ehryourway.com/api/v1/smart/token",
  "issuer": "https://33268353-aedc-48cf-a5a1-a67cec9cf4eb.ciamlogin.com/33268353-
aedc-48cf-a5a1-a67cec9cf4eb/v2.0", "jwks_uri":
  "https://ehrfhirdev.ehryourway.com/api/v1/discovery/keys",
  "end_session_endpoint":
  "https://ehrfhirdev.ehryourway.com/api/v1/logout",
  "revocation_endpoint":
  "https://ehrfhirdev.ehryourway.com/api/v1/smart/revoke",
  "introspection_endpoint":
  "https://ehrfhirdev.ehryourway.com/api/v1/smart/introspect",
  "response_types_supported": [
    "code"
  ],
  "subject_types_supported": [ "public"
  ],
  "id_token_signing_alg_values_supported": [ "RS256"
  ],
  "scopes_supported": [
    "openid",
    "offline_access",
    "fhirUser",
    "launch/patient",
    "launch",
    "user/AllergyIntolerance",
    "user/CarePlan.rs",
```

"user/CareTeam.rs",
"user/Condition.rs",
"user/Condition.rs?category=http://hl7.org/fhir/us/core/CodeSystem/condition-
category|health-concern",
"user/Condition.rs?category=http://terminology.hl7.org/CodeSystem/condition-
category|encounter-diagnosis",
"user/Condition.rs?category=http://terminology.hl7.org/CodeSystem/condition-
category|problem-list-item", "user/Coverage.rs",
"user/Device.rs",
"user/DiagnosticReport.r
s",
"user/DiagnosticReport.rs?category=http://loinc.org|LP29684-5",
"user/DiagnosticReport.rs?category=http://loinc.org|LP29708 -2",
"user/DiagnosticReport.rs?category=http://loinc.org|LP7839 -6",
"user/DiagnosticReport.rs?category=http://terminology.hl7.org/CodeSystem/v2 -
0074|LAB", "user/DocumentReference.rs",
"user/DocumentReference.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-
documentreference-category|clinical-note", "user/Encounter.rs",
"user/Goal.rs",
"user/Immunization.rs",
"user/MedicationDispen
se.rs",
"user/MedicationReques
t.rs",
"user/Observation.rs",
"user/Observation.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-
category|cognitive-status",
"user/Observation.rs?category=http://hl7.org/fhir/us/core/CodeSystem/ us-core-
category|disability-status",
"user/Observation.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-
category|functional-status",
"user/Observation.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-
category|sdoh",
"user/Observation.rs?category=http://terminology.hl7.org//CodeSystem -
observation-category|social-history",
"user/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observati
on -category|activity", "user/Observation.rs?category=http://terminology.
hl7.org/CodeSystem/observation-category|imaging",
"user/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observati
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"user/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observati
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"user/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observati
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"user/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observati
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"user/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observatio
n-category|exam", "user/Organization.rs",
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"user/Practitioner.rs",
"user/PractitionerRole.rs",
", "user/Procedure.rs",
"user/Provenance.rs",
"user/QuestionnaireRes
ponse.rs",

"user/RelatedPerson.rs",
"user/ServiceRequest.rs"
,
"user/ServiceRequest.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-category|functional-status", "user/ServiceRequest.rs?category=http://snomed.info/sct|surgical-procedure",
"user/Specimen.rs",
"patient/AllergyIntolerance.rs",
"patient/CarePlan.rs",
"patient/CareTeam.rs",
"patient/Condition.rs",
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"patient/Condition.rs?category=http://terminology.hl7.org/CodeSystem/condition-category|encounter-diagnosis",
"patient/Condition.rs?category=http://terminology.hl7.org/CodeSystem/condition-category|problem-list-item", "patient/Coverage.rs",
"patient/Device.rs",
"patient/DiagnosticReport.rs",
"patient/DiagnosticReport.rs?category=http://loinc.org|LP29684 -5",
"patient/DiagnosticReport.rs?category=http://loinc.org|LP29708 -2",
"patient/DiagnosticReport.rs?category=http://loinc.org|LP7839-6",
"patient/DiagnosticReport.rs?category=http://terminology.hl7.org/CodeSystem/v2-0074|LAB", "patient/DocumentReference.rs",
"patient/DocumentReference.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-documentreference-category|clinical-note", "patient/Encounter.rs",
"patient/Goal.rs",
"patient/Immunization.rs",
"patient/MedicationDispense.rs",
"patient/MedicationRequest.rs",
"patient/Observation.rs"
,
"patient/Observation.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-category|cognitive-status",
"patient/Observation.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-category|disability-status",
"patient/Observation.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-category|functional-status",
"patient/Observation.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-category|sdoh",
"patient/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observation-category|social-history",
"patient/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observation-category|activity",
"patient/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observation-category|imaging",
"patient/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observation-category|laboratory",
"patient/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observation-category|procedure",

"patient/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observation-category|survey",
"patient/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observation-category|vital-signs",
"patient/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observation-category|exam", "patient/Organization.rs",
"patient/Patient.rs",
"patient/Practitioner.rs",
"patient/PractitionerRole.rs",
"patient/Procedure.rs",
"patient/Provenance.rs",
"patient/QuestionnaireResponse.rs",
"patient/RelatedPerson.rs",
"patient/ServiceRequest.rs",
"patient/ServiceRequest.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-category|functional-status",
"patient/ServiceRequest.rs?category=http://snomed.info/sct|surgical-procedure",
"patient/Specimen.rs",
"system/AllergyIntolerance.rs",
"system/CarePlan.rs",
"system/CareTeam.rs",
"system/Condition.rs",
"system/Condition.rs?category=http://hl7.org/fhir/us/core/CodeSystem/condition-category|health-concern",
"system/Condition.rs?category=http://terminology.hl7.org/CodeSystem/condition-category|encounter-diagnosis",
"system/Condition.rs?category=http://terminology.hl7.org/CodeSystem/condition-category|problem-list-item", "system/Coverage.rs",
"system/Device.rs",
"system/DiagnosticReport.rs",
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"system/DiagnosticReport.rs?category=http://loinc.org|LP29708 -2",
"system/DiagnosticReport.rs?category=http://loinc.org|LP7839-6",
"system/DiagnosticReport.rs?category=http://terminology.hl7.org/CodeSystem/v2-0074|LAB", "system/DocumentReference.rs",
"system/DocumentReference.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-documentreference-category|clinical-note", "system/Encounter.rs",
"system/Goal.rs",
"system/ImmunizationRecords",
"system/MedicationDispense.rs",
"system/MedicationRequest.rs",
"system/Observation.rs",
,
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"system/Observation.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-category|disability-status",
"system/Observation.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-category|functional-status",
"system/Observation.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-category|sdoh",

```
"system/Observation.rs?category=http://terminology.hl7.org//CodeSystem -
observation-category|social-history",
"system/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observatio
n-category|activity",
"system/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observat
ion-category|imaging",
"system/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observat
ion-category|laboratory",
"system/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observat
ion-category|procedure",
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n-category|survey",
"system/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observat
ion-category|vital-signs",
"system/Observation.rs?category=http://terminology.hl7.org/CodeSystem/observat
ion-category|exam", "system/Organization.rs",
"system/Patient.rs",
"system/Practitioner.rs",
"system/PractitionerRole.rs",
"system/Procedure.rs",
"system/Provenance.rs",
"system/QuestionnaireRespo
nse.rs",
"system/RelatedPerson.rs",
"system/ServiceRequest.rs",
"system/ServiceRequest.rs?category=http://hl7.org/fhir/us/core/CodeSystem/us-core-
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procedure",
"system/Specimen.rs"
],
"grant_types_supported
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"authorization_code",
"refresh_token"
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pported": [ "S256"
],
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"launch-ehr",
"launch-
standalone",
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post", "client-
public",
"client-confidential-
symmetric", "client-
confidential-
asymmetric", "sso-
openid-connect",
```

```
"context-  
banner",  
"context-style",  
"context-ehr-  
patient",  
"context-standalone-  
patient", "permission-  
offline", "permission-  
patient", "permission-  
user",  
"authorize-post",  
"permission-v1",  
"permission-v2",  
"context-ehr-  
encounter"  
]  
}
```

Error codes

JSON response is returned from the FHIR Server
along with the code 200: Ok
401: Unauthorized
400: Bad Request
500: Internal Server Error

Obtain authorization code

The app supplies the following parameters to the EHR's "authorize" endpoint.

Parameters

redirect_uri	required	Must match one of the client's pre-registered redirect URIs.
client_id	required	The client's identifier
redirect_uri	required	Must match one of the client's pre-registered redirect URIs
launch	condition	When using the EHR Launch flow, this must match the launch value received from the HER. Omitted when using the standalone Launch
scope	required	Must describe the access that the app needs, including scopes like patient/*.rs, openid and fhirUser (if app needs authenticated patient identity) and either: a launch value indicating that the app wants to receive already-established launch context details from the EHR a set of launch context requirements in the form launch/patient, which asks the EHR to establish context on your behalf. Please refer to scopes support in the table below
state	required	An opaque value used by the client to maintain state between the request and callback. The authorization server includes this value when redirecting the user-agent back to the client. The parameter SHALL be used for preventing cross-site request forgery or session fixation attacks. The app SHALL use an unpredictable value for the state parameter with at least 122 bits of entropy (e.g., a properly configured random uuid is suitable).
aud	required	URL of the EHR resource server from which the app wishes to retrieve FHIR data. This parameter prevents leaking a genuine bearer token to a counterfeit resource server. (Note that in the case of an RT launch flow, this aud value is the same as the launch's iss value.) Note that the aud parameter is semantically equivalent to the resource parameter defined in RFC8707. SMART's aud parameter predates RFC8707 and we have decided not to rename it for reasons of backwards compatibility. We might consider renaming SMART's aud parameter in the future if implementer feedback indicates that alignment would be valuable. For the current release, servers SHALL support the aud parameter and MAY support a resource parameter as a synonym for aud.

Scopes Supported

Scope	Grants
patient/*.read	Permission to read and search any resource for the current patient (see notes on wildcard scopes below).
user/*.read	Permission to read and write all resources that the current user can access (see notes on wildcard scopes below).
Opened	Permission to retrieve information about the current logged-in user.

Scope	Grants
fhirUser	
Launch	Permission to obtain launch context when app is launched from an EHR.
launch/patient	When launching outside the EHR, ask for a patient to be selected at launch time.
offline_access	Request a refresh_token that can be used to obtain a new access token to replace an expired one, even after the end-user no longer is online after the access token expires.

Here's an example of an authorization request using HTTP GET. You will replace the [redirect_uri], [client_id], [launch_token], [state], [code_challenge], and [audience] placeholders with your own values.

Request

https://ehr/authorize? response_type=code& client_id=app-client-id& redirect_uri=https%3A%2F%2Fapp%2Fafter-auth& launch=xyz123& scope=launch+patient%2FObservation.rs+patient%2FPatient.rs+openid+fhirUser& state=98wrghuwuogerg97& aud=https://ehr/fhir

e.g.

[https://\[FHIRBaseURL\]/oauth/authorization?response_type=code&client_id=SAMPLE_CONFIDENTIAL_CLIENT_ID&redirect_uri=https%3A%2F%2Finferno.healthit.gov%2Finferno%2Foauth2%2Fstatic%2Fredirect&scope=launch%2Fpatient+openid+fhirUser+offline_access+patient%2FMedication.read+patient%2FAllergyIntolerance.read+patient%2FCarePlan.read+patient%2FCareTeam.read+patient%2FCondition.read+patient%2FDevice.read+patient%2FDiagnosticReport.read+patient%2FDocumentReference.read+patient%2FEncounter.read+patient%2FGoal.read+patient%2FImmunization.read+patient%2FLocation.read+patient%2FMedicationRequest.read+patient%2FObservation.read+patient%2FOrganization.read+patient%2FPatient.read+patient%2FPractitioner.read+patient%2FProcedure.read+patient%2FProvenance.read+patient%2FPractitionerRole.read&state=26a45e37-7445-4e4a-b8fb-24144eccbdc4&aud=https%3A%2F%2Finferno.healthit.gov%2Freference-server%2Fr4](https://[FHIRBaseURL]/oauth/authorization?response_type=code&client_id=SAMPLE_CONFIDENTIAL_CLIENT_ID&redirect_uri=https%3A%2F%2Finferno.healthit.gov%2Finferno%2Foauth2%2Fstatic%2Fredirect&scope=launch%2Fpatient+openid+fhirUser+offline_access+patient%2FMedication.read+patient%2FAllergyIntolerance.read+patient%2FCarePlan.read+patient%2FCareTeam.read+patient%2FCondition.read+patient%2FDevice.read+patient%2FDiagnosticReport.read+patient%2FDocumentReference.read+patient%2FEncounter.read+patient%2FGoal.read+patient%2FImmunization.read+patient%2FLocation.read+patient%2FMedicationRequest.read+patient%2FObservation.read+patient%2FOrganization.read+patient%2FPatient.read+patient%2FPractitioner.read+patient%2FProcedure.read+patient%2FProvenance.read+patient%2FPractitionerRole.read&state=26a45e37-7445-4e4a-b8fb-24144eccbdc4&aud=https%3A%2F%2Finferno.healthit.gov%2Freference-server%2Fr4)

Response

The EHR's authorization server reviews the request from your application. If approved, the authorization server redirects the browser to the redirect URL supplied in the initial request and appends the following querystring parameter.

- **code**: This parameter contains the authorization code generated by EHR, which will be exchanged for the access token in the next step.
- **state**: The exact value received from the client.

Here is how redirect URL will look like

Location: https://app/after-auth?code=123abc&state=98wrghuwuogerg97

https://inferno.healthit.gov/inferno/oauth2/static/redirect?code=SAMPLE_CODE.bGF1bmNoL3BhdGllbnQyb3BlbmlkIGZoaXJvc2VyIG9mZmxpb

[mVfyWNjzXNziHBhdGllbnQvTWVkaWNhdGlvbi5yZWFKiHBhdGllbnQvQWxsZXJneUludG9sZXJhbmNlLnJlYWQgcGF0aWVudC9DYXJlUGxhbi5yZWFKiHBhdGllbnQvQ2FyZVRIYW0ucmVhZCBwYXRpZW50L0Nvbml6bWVudC9EaWFnbm9zdG](#)
[lUmVwb3J0LnJlYWQgcGF0aWVudC9Eb2N1bWVudFJlZmVyZW5jZS5yZWFKiHBhdGllbnQvRW5jb3VudGVyLnJlYWQgcGF0aWVudC9Hb2FsLnJlYWQgcGF0aWVudC9JbW11bml6YXRpb24ucmVhZCBwYXRpZW50L0xvY2F0aW9uLnJlYWQgcGF0aWVudC9NZWRpY2F0aW9uUmVxdWVzdC5yZWFKiHBhdGllbnQvT2JzZXJ2YXRpb24ucmVhZCBwYXRpZW50L09yZ2FuaXphdGlvbi5yZWFKiHBhdGllbnQvUGF0aWVudC5yZWFKiHBhdGllbnQvUHJhY3RpdGlvbmVyLnJlYWQgcGF0aWVudC9Qcm9jZWR1cmUucmVhZCBwYXRpZW50L1Byb3ZlbnFuY2UucmVhZCBwYXRpZW50L1ByYWN0aXRpb25lclJv bGUucmVhZCA=.ODU=&state=26a45e37-7445-4e4a-b8fb-24144eccbdc4](#)

After receiving the authorization code, your application trades the code for a JSON object containing an access token and contextual information by sending an HTTP POST to the token endpoint using a Content-Type header with value of "application/x-www-form-urlencoded".

Error codes

JSON response is returned from the FHIR Server along with the code 200: Ok
 401: Unauthorized
 400: Bad Request
 500: Internal Server Error

Obtain access token

For **public apps**, authentication not required because a client with no secret cannot prove its identity when it issues a call. (The end-to-end system can still be secure because the client comes from a known, https protected endpoint specified and enforced by the redirect uri.)

For **confidential apps**, authentication is required. Confidential clients SHOULD use Asymmetric Authentication if available, and MAY use Symmetric Authentication.

There are two different requests to get access token based on authentication type. In case of Symmetric ("client secret") authentication app issues an HTTP POST to the EHR authorization server's token endpoint URL using content-type application/x-www-form-urlencoded. In case of Asymmetric authentication app, generate a client authentication assertion and prepare arguments for POST to token API:

Request

Parameters

grant_type	required	Fixed value: authorization_code for symmetric and client_credentials for assymmetric
Code	required	Code that the app received frm the authorization sever
redirect	required	The same redirect_uri used in the initial
_uri	condition	authorization request Required for public apps.
client_id	condition	Omit for confidential apps
client_assertion_type	condition	Required for asymmetric authentication. Set to urn:ietf:params:oauth:client-assertion-type:jwt-bearer
client_assertion_type	condition	Required for asymmetric authentication. Set to a JWT signed with your dynmaic client's private key
Scope	condition	system/*.read for backend services type of application (bulk operations)

Symmetric Authentication Request

https://[FHIRBaseURL]/oauth/token

Payload

Parameters

<code>access_token</code>	required	The access token issued by the authorization server
<code>token_type</code>	required	Fixed value: Bearer
<code>expires_in</code>	recommended	Lifetime in seconds of the access token, after which the token SHALL NOT be accepted by the resource server
<code>scope</code>	required	Scope of access authorized. Note that this can be different from the scopes requested by the app.
<code>id_token</code>	optional	Authenticated user identity and user details, if requested

`refresh_token` Token that can be used to obtain a new access token, using the same or a subset of the original authorization grants

Sample response

```
{
  "access_token": "3e934471-1dbf-4a69-8e1f-227f9fd65428",
  "refresh_token": "31c4476d-6e9d-41a3-a272-065d05c3599d",
  "patient": "85",
  "scope": "launch/patient openid fhirUser offline_access patient/*.read ",
  "need_patient_banner": false,
  "id_token":
  "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiJ9.eyJzdWIiOiJkYjExNzY0MDU4LTRhODYtYTcxMi0yMDU2NDU5ZDUxMzgiLCJhdWQiOiJ1OTU1QTEVfQ"
}
```

```
09ORKIERU5USUFMX0NMSUVOVF9JRCIsImIzcyI6Imh0dHBzOi8vaW5mZXJuby5oZWZsdGhpdC5nb3Yvc
mVmZXJlbnNILXNlcnZlci9yNCIsImV4cCI6
MTY4NDU3OTc5NywiaWF0IjoxNjUzMDQzNzk3LCJmaGlyVXNlcnl6Imh0dHBzOi8vaW5mZXJuby5oZWZsd
GhpdC5nb3YvcmlbnNILXNlcnZlci9
yNC9QYXRpZW50LzgzIn0.R1oMsXCTXMKiM1ohCxb3LkgXrgfBebNlaC_jam9sBOwYCCw7K4TLUBmVzKIG
b3_- 5wZtqyTTqO6bRwsituXSefoS1Qwl14wLGpk-fOsr6M4uSXW5An4WUy8858j3aa5Qkcf0pw4QP3-
rlmVJoHuN_In4ULn5bpRQJklIEQ2ySPj3pkoWWMwfij5p7nNfvgkE2QOCM4Q-
ounE6oLyYZJp_OGvVhkREu8jO77m3Tgsji_jbX7g4-
deuwB4F9EHUfpjfhM3TB1GloQ7cgJFhHOs9mTccpT0aYYQkmCJGRx1R5jl-I56p4_63IkU2BRau-
INII3Zvcnsz5ajpvU46elwg",
"smart_style_url": "https://[FHIRBaseURL]/app/smart-
style-url", "token_type": "bearer",
"expires_in": 3600
}
```

Error codes

JSON response is returned from the FHIR Server
along with the code 200: Ok
401: Unauthorized
400: Bad Request
500: Internal Server Error

At this point, **the authorization flow is complete.**

Access FHIR API

With a valid access token, the app can access protected EHR data by issuing a FHIR API call to the FHIR endpoint on the EHR's resource server. Only HTTP GET request types are supported while accessing FHIR Resource API. Following resources are supported

FHIR Resource: Each resource returned is expected to conform to the below mentioned profiles

Profile Name	URL
US Core Patient	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-patient.html
US Core Allergy Intolerance	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-allergyintolerance.html
US Core Care Plan	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-careplan.html
US Core Care Team	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-careteam.html
US Core Condition Encounter Diagnosis	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-condition-encounter-diagnosis.html
US Core Condition Problems and Health Concerns	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-condition-problems-health-concerns.html
US Core Coverage	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-coverage.html
US Core Implantable Device	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-implantable-device.html
US Core DiagnosticReport for Laboratory Results Reporting	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-diagnosticreport-lab.html
US Core DiagnosticReport for Report and Note Exchange	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-diagnosticreport-note.html
US Core DocumentReference	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-documentreference.html
US Core Encounter	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-encounter.html
US Core Goal	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-goal.html
US Core Immunization	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-immunization.html
US Core MedicationRequest	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-medicationrequest.html
US Core MedicationDispense	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-medicationdispense.html
US Core Observation Pregnancy Status	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-observation-pregnancystatus.html
US Core Observation Occupation	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-observation-occupation.html
US Core Smoking Status Observation	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-smokingstatus.html
US Core Procedure	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-procedure.html
US Core RelatedPerson	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-relatedperson.html
US Core Provenance	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-provenance.html

US Core Vital Signs	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-vital-signs.html
US Core Observation Screening Assessment	https://hl7.org/fhir/us/core/STU6.1/StructureDefinition-us-core-observation-screening-assessment.html

Request : Patient

Search Parameters

_id : GET [Base_URL]/Patient/_search?Patient=[id]

Identifier : GET [Base_URL]/Patient?identifier={system|}[code]

Name : GET [Base_URL]/Patient?name=[string]

birthdate + name : GET [Base_URL]/Patient?birthdate=[date]&name=[string] **gender + name** : GET [Base_URL]/Patient?gender={system|}[code]&name=[string] Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "6f1d6f2d-c42b-453b-8f5a-8d74c24f6fb6", "type": "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://FHIR-Base-URL/Patient?_count=10&_id=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b",
      "fullUrl": "https://FHIR-Base-URL/Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b", "resource": {
        "resourceType": "Patient",
        "id": "17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b", "meta": {
          "versionId": "3",
          "lastUpdated": "2022-03-24T10:50:49.231Z",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-patient"
          ]
        },
        "text": {
          "status": "generated",
          "div": "<div xmlns=\"http://www.w3.org/1999/xhtml\">Generated by <a href=\"https://github.com/synthetichealth/synthea\">Synthea</a>.Version identifier: v2.6.1-3-g50f4f58f\n . Person seed: 4286870567281389426 Population seed: 3</div>"
        },
        "extension": [
          {
            "extension": [
              {
                "url": "ombCategory",
                "valueCoding": {
                  "system": "urn:oid:2.16.840.1.113883.6.238",
                  "code": "2106-3",
                  "display": "White"
                }
              }
            ]
          }
        ]
      }
    }
  ]
}
```

```

{
  "url": "text",
  "valueString":
  "White"
}
],
"url": "http://hl7.org/fhir/us/core/StructureDefinition/us-core-race"
},
{
  "extension": [
    {
      "url": "ombCategory",
      "valueCoding": {
        "system":
        "urn:oid:2.16.840.1.113883.6.238
        ", "code": "2186-5",
        "display": "Non Hispanic or Latino"
      }
    },
    {
      "url": "text",
      "valueString": "Non Hispanic or Latino"
    }
  ],
  "url": "http://hl7.org/fhir/us/core/StructureDefinition/us-core-ethnicity"
},
{
  "url": "http://hl7.org/fhir/StructureDefinition/patient-
  mothersMaidenName", "valueString": "Christen366
  Murray856"
},
{
  "url":
  "http://hl7.org/fhir/us/core/StructureDefinition/us-
  core-birthsex", "valueCode": "M"
},
{
  "url":
  "http://hl7.org/fhir/StructureDefinition/patient-
  birthPlace", "valueAddress": {
    "city":
    "Springfield",
    "state":
    "Massachusetts",

    "country": "US"
  }
}
],
"identifier": [
  {
    "system":
    "https://github.com/synthetichealth/synthea
    ", "value": "e91975f5-9445-c11f-cabf-
    c3c6dae161f2"
  },
  {

```

```

"type": {
  "coding": [
    {
      "system":
        "http://terminology.hl7.org/CodeSystem/v2-
        0203", "code": "MR",
      "display": "Medical Record Number"
    }
  ],
  "text": "Medical Record Number"
},
"system":
"http://hospital.smarthealthit.org",
"value": "e91975f5-9445-c11f-cabf-
c3c6dae161f2"
},
{
  "type": {
    "coding": [
      {
        "system":
          "http://terminology.hl7.org/CodeSystem/v2-
          0203", "code": "SS",
        "display": "Social Security Number"
      }
    ],
    "text": "Social Security Number"
  },
  "system":
"http://hl7.org/fhir/sid/us-ssn",
"value": "999-61-9798"
},
{
  "type": {
    "coding": [
      {
        "system":
          "http://terminology.hl7.org/CodeSystem/v2-
          0203", "code": "DL",
        "display": "Driver's License"
      }
    ],
    "text": "Driver's License"
  },
  "system":
"urn:oid:2.16.840.1.113883.4.3.25"
, "value": "S99940282"
}
],
"name": [
  {
    "use": "official",
    "family":
      "Harry",
    "given": [
      "Tom"
    ]
  }
],

```

```

"prefix": [
  "Mr."
],
"suffix": [
  "Jr."
]
},
{
  "use":
  "maiden",
  "given": [
    "Alex"
  ]
}
],
"telecom": [
  {
    "system": "phone",
    "value": "555-770-2787",
    "use": "home"
  }
],
"gender": "male",
"birthDate": "1941-09-05", "address":
[
  {
    "extension": [
      {
        "extension": [
          {
            "url": "latitude",
            "valueDecimal": 42.1343534042923
          },
          {
            "url": "longitude",
            "valueDecimal": -72.67217549422628
          }
        ]
      },
      {
        "url": "http://hl7.org/fhir/StructureDefinition/geolocation"
      }
    ]
  },
  {
    "line": [
      "599 Schowalter Promenade"
    ],
    "city": "West
Springfield",
    "state": "MA",
    "postalCode":
    "01089",
    "country": "US",
    "period": {
      "start": "1940-09-05"
    }
  }
]
}

```

```

],
"maritalStat
us": {
"coding": [
{
"system":
"http://terminology.hl7.org/CodeSystem/v3-
MaritalStatus", "code": "M",
"display": "M"
}
],
"text": "M"
},
"multipleBirthBoolean":
false, "communication": [
{
"language": {
"coding": [
{
"system": "urn:ietf:bcp:47",
"code": "en-
US",
"display":
"English"
}
]
},
"text": "English"
}
]
},
"search": {
"mode":
"match",
"score": 1
}
}
]
}

```

Request : AllergyIntolerance

Search Parameters

GET GET

[Base_URL]/AllergyIntolerance?Patient=

[id] Response

Code: 200 (Success)

```

{
"resourceType": "AllergyIntolerance",
"id": "17e7758c319-7955ecfe-94da-4071-8488-4ef21425ed85",
"meta": {
"versionId"
: "1",
"lastUpdated": "2022-01-20T11:56:52.889Z",
"profile": [

```

```

    "http://hl7.org/fhir/us/core/StructureDefinition/us-core-allergyintolerance"
  ]
},
"clinicalStat
us": {
  "coding": [
    {
      "system":
      "http://terminology.hl7.org/CodeSystem/allergyintoleran
ce-clinical", "code": "inactive"
    }
  ]
},
"verificationSta
tus": {
  "coding": [
    {
      "system":
      "http://terminology.hl7.org/CodeSystem/allergyintolerance-
verification", "code": "confirmed"
    }
  ]
},
"type":
"allergy",
"category":
[ "food"
],
"criticality":
"low", "code": {
"coding": [
  {
    "system":
    "http://snomed.info/sct",
    "code": "300916003",
    "display": "Latex allergy"
  }
],
"text": "Latex allergy"
},
"patient": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdfb2be4b"
},
"recordedDate": "1941-10-14T18:33:18-05:00",
"reaction": [
  {
    "manifestation": [
      {
        "coding": [
          {
            "system":
            "http://snomed.info/sct",
            "code": "271807003",
            "display": "skin rash"
          }
        ],

```

```
    "text": "skin rash"  
  }  
]  
}  
]  
}
```

Request : CarePlan

GET [Base_URL]/ CarePlan=assess-plan&patient=[id] e.g. [https://\[Base_URL\]/CarePlan?category=assess-plan&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b](https://[Base_URL]/CarePlan?category=assess-plan&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b)
Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "79d7a78e-de9b-4c5c-b51d-45b72963ae1f", "type":
  "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-
server/CarePlan?_count=10&category=assess-
plan&patient=Patient/17e77411359-8837d878-ea1e-45b5-bb89-
882fdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e776e13ff-1ea7505d-f475-4f49-adde-30e69df86734",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/CarePlan/17e776e13ff-
1ea7505d-f475-4f49-adde- 30e69df86734", "resource": {
        "resourceType": "CarePlan",
        "id": "17e776e13ff-1ea7505d-f475-4f49-adde-
30e69df86734", "meta": {
          "versionId": "2",
          "lastUpdated": "2022-01-21T10:56:06.304Z",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-careplan"
          ]
        },
        "text": {
          "status": "generated",
          "div": "<div xmlns=\"http://www.w3.org/1999/xhtml\">Care Plan for Fracture care.<br/>Activities:
<ul><li>Fracture care</li><li>Fracture care</li></ul><br/>Care plan is meant to treat Fracture of clavicle.</
div>"
        },
        "status": "active",
        "intent":
        "order",
        "category":
        [
          {
            "coding": [
              {
                "system":
                "http://hl7.org/fhir/us/core/CodeSystem/careplan-
category", "code": "assess-plan"
              }
            ]
          }
        ]
      }
    }
  ]
}
```

```
},
{
  "coding": [
    {
      "system":
        "http://snomed.info/sct",
      "code": "384758001",
      "display": "Self-care interventions (procedure)"
    }
  ],
  "text": "Self-care interventions (procedure)"
}
],
```

```

"subject": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882dfdb2be4b"
},
"encounter": {
  "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
},
"period": {
  "start": "1941-10-02T18:33:18-05:00"
},
"careTeam": [
  {
    "reference": "CareTeam/17e775e7546-36e6a4cd-264e-4a94-92fa-cdf1b2fa30c1"
  }
],
"activity": [
  {
    "detail": {
      "code": {
        "coding": [
          {
            "system":
              "http://snomed.info/sct",
            "code": "409002",
            "display": "Food allergy diet"
          }
        ],
        "text": "Food allergy diet"
      },
      "status": "in-
progress",
      "location": {
        "reference": "Location/17e7750e68f-6266aec8-0cd3-443e-
adb9-be37f3bf25f2", "display": "HOLYOKE MEDICAL
CENTER"
      }
    }
  },
  {
    "detail": {
      "code": {
        "coding": [
          {
            "system":
              "http://snomed.info/sct",
            "code": "58332002",
            "display": "Allergy education"
          }
        ],
        "text": "Allergy education"
      },
      "status": "in-
progress",
      "location": {
        "reference": "Location/17e7750e68f-6266aec8-0cd3-443e-
adb9-be37f3bf25f2", "display": "HOLYOKE MEDICAL
CENTER"
      }
    }
  }
]

```

```
}
},
{
  "detail": {
    "code": {
      "coding": [
        {
          "system":
            "http://snomed.info/sct",
          "code": "58332002",
          "display": "Allergy education"
        }
      ],
      "text": "Allergy education"
    },
    "status": "in-progress",

    "location": {
      "reference": "Location/17e7750e68f-6266aec8-0cd3-443e-
adb9-be37f3bf25f2", "display": "HOLYOKE MEDICAL
CENTER"
    }
  }
}
],
},
"search": {
  "mode":
  "match",
  "score": 1
}
}
]
}
```

Request : CareTeam

GET

[Base_URL]/CareTeam?patient=[id]&sta

tus=active e.g.

https://[Base_URL]/CareTeam?patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b&status=active Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "492509fd-0650-4e2e-834f-41fc7b132a5e",
  "type":
  "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-
server/CareTeam?_count=10&patient=17e77411359-8837d878-ea1e-45b5- bb89-
882fdb2be4b&status=http://hl7.org/fhir/care-team-status%7Cactive&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e775e7546-36e6a4cd-264e-4a94-92fa-cdf1b2fa30c1",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-
server/CareTeam/17e775e7546-36e6a4cd-264e-4a94-92fa- cdf1b2fa30c1", "resource": {
        "resourceType": "CareTeam",
        "id": "17e775e7546-36e6a4cd-264e-4a94-
92fa-cdf1b2fa30c1", "meta": {
          "versionId": "1",
          "lastUpdated": "2022-01-20T12:03:06.182Z",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-careteam"
          ]
        },
        "status":
        "active",
        "subject": {
          "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b"
        },
        "encounter": {
          "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
        },
        "period": {
          "start": "1941-10-02T18:33:18-05:00"
        },
        "participant": [
          {
            "role": [
```

```

{
  "coding": [
    {
      "system":
        "http://snomed.info/sct",
      "code": "116154003",
      "display": "Patient"
    }
  ],
  "text": "Patient"
}
],
"member": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b",

  "display": "Mr. Dustin31 Ritchie586"
}
},
{
  "role": [
    {
      "coding": [
        {
          "system":
            "http://snomed.info/sct",
          "code": "223366009",
          "display": "Healthcare professional (occupation)"
        }
      ],
      "text": "Healthcare professional (occupation)"
    }
  ],
  "member": {
    "reference": "Practitioner/17e774bb850-6b7b7f50-ed52-4523-a3a8-60fb0ef71c5b", "display": "Dr. Patricia625 Kilback373"
  }
}
},
{
  "role": [
    {
      "coding": [
        {
          "system":
            "http://snomed.info/sct",
          "code": "224891009",
          "display": "Healthcare services (qualifier value)"
        }
      ],
      "text": "Healthcare services (qualifier value)"
    }
  ],
  "member": {
    "reference": "Organization/17e774dca91-e7e4e9e3-390e-4c10-83ae-88beabc176e2", "display": "HOLYOKE MEDICAL CENTER"
  }
}
}

```

```
}
],
"managingOrganization": [
  {
    "reference": "Organization/17e774dca91-e7e4e9e3-390e-
4c10-83ae-88beabc176e2", "display": "HOLYOKE MEDICAL
CENTER"
  }
]
},
"search": {
  "mode":
  "match",
  "score": 1
}
]
}
```

Request: Problems / Health Concern

Search Parameters

```
GET [base]/Condition?patient=[id]&category={system|}[code]
GET
[base]/Condition?patient=[id]&category=http://terminology.hl7.org/CodeSystem/condition-category|problem-list-item GET
[base]/Condition?patient=[id]&category=http://hl7.org/fhir/us/core/CodeSystem/condition-category|health-concern GET
[base]/Condition?patient=[id]&category=http://terminology.hl7.org/CodeSystem/condition-category|encounter-diagnosis e.g
[Base_URL]/Condition?patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b&category=http://hl7.org/fhir/us/core/CodeSystem/condition-category|health-concern
```

Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "f537c30e-fab7-45f0-8167-4ab7a48386ec", "type":
  "searchset",
  "total": 2,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-server/Condition?_count=10&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e7777ce8c-c66752fb-ee1b-40c2-ba5a-2e6ee89b3e1a",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Condition/17e7777ce8c-c66752fb-ee1b-40c2-ba5a-2e6ee89b3e1a",
      "resource": {
        "resourceType": "Condition",
        "id": "17e7777ce8c-c66752fb-ee1b-40c2-ba5a-2e6ee89b3e1a", "meta": {
          "versionId": "1",
          "lastUpdated": "2022-01-20T12:30:47.436Z",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-condition"
          ]
        },
        "clinicalStatus": {
          "coding": [
            {
```

```

    "system":
      "http://terminology.hl7.org/CodeSystem/condition-
      clinical", "code": "resolved"
    }
  ]
},
"verificationSta
tus": {
  "coding": [
    {
      "system":
        "http://terminology.hl7.org/CodeSystem/condition-
        ver-status", "code": "confirmed"
    }
  ]
},
"category": [
  {
    "coding": [
      {
        "system":
          "http://terminology.hl7.org/CodeSystem/condition-
          category", "code": "encounter-diagnosis",

          "display": "Encounter Diagnosis"
        }
      ]
    }
  ],
  "code": {
    "coding": [
      {
        "system":
          "http://snomed.info/sct",
          "code": "444814009",
          "display": "Viral sinusitis (disorder)"
        }
      ]
    },
    "text": "Viral sinusitis (disorder)"
  },
  "subject": {
    "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdfb2be4b"
  },
  "encounter": {
    "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
  },
  "onsetDateTime": "1940-11-09T18:33:18-05:00",
  "abatementDateTime": "1940-11-30T18:33:18-
  05:00", "recordedDate": "1940-11-
  09T18:33:18-05:00"
},
"search": {
  "mode":
  "match",
  "score": 1
}
},
{

```

```

"id": "17eb029f925-40603327-0ac3-48dd-972b-6c882b8751f5",
"fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-
server/Condition/17eb029f925-40603327-0ac3-48dd-972b- 6c882b8751f5",
"resource": {
  "resourceType": "Condition",
  "id": "17eb029f925-40603327-0ac3-48dd-972b-6c882b8751f5",
  "meta": {
    "versionId"
    : "1",
    "lastUpdated": "2022-01-31T12:44:07.847Z",
    "profile": [
      "http://hl7.org/fhir/us/core/StructureDefinition/us-core-condition"
    ]
  },
  "clinicalStat
  us": {
    "coding": [
      {
        "system":
        "http://terminology.hl7.org/CodeSystem/condition-
        clinical", "code": "resolved"
      }
    ]
  },
  "verificationSta
  tus": {
    "coding": [
      {
        "system":
        "http://terminology.hl7.org/CodeSystem/condition-
        ver-status", "code": "confirmed"
      }
    ]
  },
  "category": [
    {
      "extension": [
        {
          "url": "http://hl7.org/fhir/StructureDefinition/data-
          absent-reason", "valueCode": "unknown"
        }
      ]
    }
  ],
  "code": {
    "coding": [
      {
        "system":
        "http://snomed.info/sct",
        "code": "195662009",
        "display": "Acute viral pharyngitis (disorder)"
      }
    ],
    "text": "Acute viral pharyngitis (disorder)"
  },
  "subject": {

```

```
"reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b"
},
"encounter": {
  "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
},
"onsetDateTime": "1961-06-25T01:11:45-04:00",
"abatementDateTime": "1961-07-07T01:11:45-
04:00", "recordedDate": "1961-06-
25T01:11:45-04:00"
},
"search": {
  "mode":
  "match",
  "score": 1
}
}
]
```

Request: Coverage

Search Parameters

GET [Base_URL]/Coverage?patient=[id]

e.g. [Base_URL]/Coverage?patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b
Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "84acc0bf-6fc8-45e5-bf98-
b87596e2dd1f", "type":
"searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-
server/Coverage?_count=10&patient=17e77411359-8837d878-ea1e-45b5-bb89-
882fdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e777b3f34-04bc3627-92d3-43bb-92e7-35533110f750",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-
server/Coverage/17e777b3f34-04bc3627-92d3-43bb-92e7-35533110f750",
      "resource": {
        "resourceType": "Coverage",
        "id": "63498bbe-ce4b-403f-b5b0-9289214953c8",
        "meta": {
          "versionId":
            "1",
          "lastUpdated": "2025-11-28T08:44:32.971+00:00",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-coverage"
          ]
        },
        "text": {
          "status": "generated",
          "div": "<div xmlns='http://www.w3.org/1999/xhtml'><table style='width:100%;'
border='1'><thead ><tr><th>Policy Name</th><th>Policy Start Date</th><th>Policy End
Date</th><th>Policy Status</th><th>Payer Name</th></tr></thead><tbody><tr><td>AETNA MC
AETNA OPEN ACCESS</td><td>2000-01-01T00:00:00.000Z</td><td>2060-01-
01T00:00:00.000Z</td><td>active</td><td>MEDICAID</td></tr></tbody></table></div>"
        },
        "identifier": [
          {
            "use":
              "usual",
            "type": {
              "coding": [
```

```

    {
      "system":
      "http://terminology.hl7.org/CodeSystem/v2-
      0203", "code": "MB",
      "display": "Member Number"
    }
  ],
  "text": "Member ID"
},
"system":
"urn:oid:2.16.840.1.113883.3.8138.
1.2", "value": "5739091384008704-
1-40949-27204"
}
],
"status":
"active",
"type": {
  "coding": [
    {
      "system":
      "https://nahdo.org/sopt",
      "code": "3712",
      "display": "PPO"
    },
    {
      "system":
      "http://terminology.hl7.org/CodeSystem/v3-
      ActCode", "code": "PPO",
      "display": "preferred provider organization policy"
    }
  ],
  "text": "PPO"
},
"subscriberId":
"ACT342049",
"beneficiary": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882dfb2be4b"
},
"relationship"
: { "coding":
[
  {
    "system":
    "http://terminology.hl7.org/CodeSystem/subscriber-
    relationship", "code": "self"
  }
],
"text": "Self"
},
"period": {
  "start": "2000-01-01T00:00:00.000Z",
  "end": "2060-01-01T00:00:00.000Z"
},
"payor": [
  {

```

```
    "reference": "Organization/7ab65004-5b3b-4135-87c2-8c2b6fb87042", "display": "MEDICARE"
  }
],
"class": [
  {
    "type": {
      "coding": [
        {
          "system":
            "http://terminology.hl7.org/CodeSystem/cover
            age-class", "code": "group",
            "display": "Group"
        }
      ]
    },
    "value": "GRP1001",
    "name": "Corporate Group Plan"
  },
  {
    "type": {
      "coding": [
        {
          "system":
            "http://terminology.hl7.org/CodeSystem/cover
            age-class", "code": "plan",
            "display": "Plan"
        }
      ]
    },
    "value": "PLN2001",
    "name": "Gold Insurance Plan"
  }
]
},
"search": {
  "mode": "match"
}
}
]
}
```

Request: Implantable Device

Search Parameters

GET [Base_URL]/Device?patient=[id]

e.g. [Base_URL]/Device?patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "5804551e-120d-4164-b05b-9705fad44fa5",
  "type":
  "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-server/Device?_count=10&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e777b3f34-04bc3627-92d3-43bb-92e7-35533110f750",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Device/17e777b3f34-04bc3627-92d3-43bb-92e7-35533110f750",
      "resource": {
        "resourceType": "Device",
        "id": "17e777b3f34-04bc3627-92d3-43bb-92e7-35533110f750",
        "meta": {
          "versionId":
          : "1",
          "lastUpdated": "2022-01-20T12:34:32.884Z",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-implantable-device"
          ]
        },
        "udiCarrier": [
          {
            "deviceIdentifier": "43069338026389",
            "carrierHRF": "(01)43069338026389(11)000302(17)250317(10)1134(21)842026117977"
          }
        ],
        "status": "active",
        "distinctIdentifier":
        "43069338026389",
        "manufactureDate": "2000-03-02T18:33:18-05:00",
        "expirationDate": "2025-03-17T19:33:18-04:00",
        "lotNumber": "1134",
      }
    }
  ]
}
```

```
"serialNumber":
"842026117977",
"deviceName": [
{
  "name": "Implantable defibrillator, device
(physical object)", "type": "user-friendly-
name"
}
],
"type": {
  "coding": [
    {
      "system":
        "http://snomed.info/sct",
      "code": "72506001",
      "display": "Implantable defibrillator, device (physical object)"
    }
  ],
  "text": "Implantable defibrillator, device (physical object)"
},
"patient": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882dfb2be4b"
}
},
"search": {
  "mode":
  "match",
  "score": 1
}
]
}
```

Request: Diagnostic Report/ Clinical Notes/ DocumentReference

Search Parameters

```
patient : GET [Base_URL]/DiagnosticReport?patient=[id]
patient + code : GET
[Base_URL]/DiagnosticReport?patient=[id]&code={system|}{code}
patient + category: GET
[Base_URL]/DiagnosticReport?patient=[id]&category=LAB
patient : GET [Base_URL]/ DocumentReference?patient=[id]
```

e.g.

```
https://[Base_URL]/DiagnosticReport?category=LP29684-5&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b
https://[Base_URL]/DiagnosticReport?category=LP7839-6&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b
https://[Base_URL]/DiagnosticReport?category=LP29708-2&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b
https://[Base_URL]/DocumentReference?patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b
```

Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "a87a8318-2dfc-488d-9f0a-6b07d7c29271",
  "type":
  "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-server/DiagnosticReport?_count=10&category=LP29684-5&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e7b6e6f1c-119e9b8b-11b9-448b-b760-dc116013b654",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/DiagnosticReport/17e7b6e6f1c-119e9b8b-11b9-448b-b760-dc116013b654", "resource": {
        "resourceType": "DiagnosticReport",
        "id": "17e7b6e6f1c-119e9b8b-11b9-448b-b760-dc116013b654",
        "meta": {
          "versionId":
          : "1",
          "lastUpdated": "2022-01-21T06:59:02.053Z",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-diagnosticreport-note"
          ]
        }
      }
    }
  ]
}
```

```

},
"status":
"final",
"category":
[
{
"coding": [
{
"system":
"http://loinc.org",
"code": "LP29684-5",
"display": "Radiology"
}
],
"text": "Radiology"
}
],
"code": {
"coding": [
{
"system": "http://loinc.org",

"code": "34117-2",
"display": "History and physical note"
}
],
"text": "History and physical note"
},
"subject": {
"reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b"
},
"encounter": {
"reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
},
"effectiveDateTime": "1974-01-
24T19:33:18-04:00", "issued": "1974-
01-24T19:33:18.715-04:00",
"performer": [
{
"reference": "Practitioner/17e774bb850-6b7b7f50-ed52-
4523-a3a8-60fb0ef71c5b", "display": "Dr. Blossom971
Christiansen251"
},
{
"reference": "Practitioner/17e774bb850-6b7b7f50-ed52-4523-a3a8-60fb0ef71c5b"
},
{
"reference": "Organization/17e774dca91-e7e4e9e3-390e-4c10-83ae-88beabc176e2"
}
],
"presentedForm": [
{
"contentType":
"text/plain", "data":
"CjE5NzQtMDEtMjQKCiMgQ2hpZWYgQ29tcGxhaW50Ci0gRGVjcmVhc2VkIGluEp1ZGdlbWVudAotIENvbmZ1c2lv
bgotIE5hc2FsiENvbmduc3Rpb24
KLSBTbmVlemluZyBGaXRzCi0gTmFzYWwgRGlzY2hhcmduCi0gQ291Z2gkCgojIEhpc3Rvcnkqb2YgUHJlc2VudCBJbGx
uZXNzCkR1c3RpbjMxIGlzIGegM

```

zMgeWVhci1vbGQgbm9uLWWhpc3BhbmljIHdoaxRlIG1hbGUuIFBhdGllbnQgaGFzIGEgaGlzdG9yeSBvZiBhY3V0ZSB
hbGxlcmdpYyByZWVjdGlvbiwgY
WN1dGUgYnJvbmNoaXRpcyAoZGlzb3JkZXlpLCBsYWNIcmF0aW9uIG9mIHROaWdoLCBvdGl0aXMgbWVkaWEsIHZ
pcmFsIHNPbnVzaXRpcyAoZGlzb
3JkZXlpLCBzcHJhaW4gb2YgYW5rbGUslGZpcnNOIGRlZ3JlZSBidXJuLCBmcmFjdHVyZSBvZiBhbmtzZSwgY2hpbGRob
29klGFzdGhtYS4KCiMgU29jaWF
slEhpc3RvcnkKUGF0aWVudCBpcyBtYXJyaWVkaLiBQYXRpZW50IGlzlHRlbnVudmFyaWx5IGhvbWVzZXNzLiBQYXRpZ
W50IGlzlGFuIGFjdGllZSBzbW9r
ZXIgaW5kIGlzlGFuIGFsY29ob2xpYy4gUGF0aWVudCBpZGVudGlmaWVzIGFzIGhldGVyb3NleHVhbC4KCIBhdGllbn
QgY29tZXMGZnJvbSBhIG1pZGRsZ
SBzb2Npb2Vjb25vbWljIGJhY2tncm91bmQuIFBhdGllbnQgZGlkIG5vdCBmaW5pc2ggaGlhbnVudCBvZiBhbmVudGll
bnQgY3VycmVudGx5IGhhcyBBZ
XRuYS4KCiMgQWxsZXJnaWVzCmxhdGV4IGFsbGVyZ3ksIGFsbGVyZ3kgdG8gc295YQoKIyBNZWRpY2F0aW9ucwph
Y2V0YW1pbm9waGVuIDMyNSB
tZyBvcmlHRhYmXldDsgMTlwIGFjdHVhdCBmbHV0aWNhc29uZSBwcm9waW9uYXRlIDAuMDQ0IG1nL2FjdHVhd
CBtZXRlcmVklGRvc2UgaW5oYW
xlcsjgRmRhMDIwNTAzIDlwMCMhY3R1YXQgYWxidXRlcm9sIDAuMDkgbWcvYWN0dWF0IG1ldGVyZWQgZG9zZSBp
bmhhbGVyOyBwcmVkbmlzb25l
IDUgbWcgb3JhbCB0YWJsZXQ7IGFzcGlyaW4gODEgbWcgb3JhbCB0YWJsZXQKCiMgQXNzZXNzbWVudCBhbmQgU
GxhbgoKCiMjIFBsYW4KUGF0aW
VudCB3YXMgZ2I2ZW4gdGhllIGZvbGxvd2luZyBpbW11bml6YXRpb25zOiBpbmZsdWVuemEsiHNIYXNvbmFsLCBpb
mplY3RhYmXlLCBwcmVzZXJ2YXR
pdmUgZnJlZS4gClRoZSBmb2xsb3dpbmcgcHJvY2VkdXJlcyB3ZXJlIGNvbmR1Y3RlZDoKLSBtZWRpY2F0aW9uIHJlY29
uY2lsaWF0aW9uChwcm9jZWR
1cmUpClRoZSBwYXRpZW50IHdhcyBwcmVzY3JpYmVklHRoZSBmb2xsb3dpbmcgbWVkaWNhdGlvbnM6Ci0gMTlw
IGFjdHVhdCBmbHV0aWNhc29u
ZSBwcm9waW9uYXRlIDAuMDQ0IG1nL2FjdHVhdCBtZXRlcmVklGRvc2UgaW5oYWxlcgotIG5kYTAyMDUwMyAyM
DAGYWN0dWF0IGFsYnV0ZXJvbC AwLjA5IG1nL2FjdHVhdCBtZXRlcmVklGRvc2UgaW5oYWxlcgo="

```
}  
]  
},  
"search": {  
  "mode":  
  "match",  
  "score": 1  
}  
}  
]  
}
```

Request: Laboratory Result Observation

Search Parameters

patient : GET [Base_URL]/DiagnosticReport?patient=[id]
patient + code : GET
[Base_URL]/DiagnosticReport?patient=[id]&code={system|}{code}
patient + category: GET
[Base_URL]/DiagnosticReport?patient=[id]&category=LAB
e.g.

[https://\[Base_URL\]/DiagnosticReport?category=http://terminology.hl7.org/CodeSystem/v2-0074%7CLAB&patient=17e77411359-8837d878-ea1e-45b5-bb89-882dfb2be4b](https://[Base_URL]/DiagnosticReport?category=http://terminology.hl7.org/CodeSystem/v2-0074%7CLAB&patient=17e77411359-8837d878-ea1e-45b5-bb89-882dfb2be4b)
[https://\[Base_URL\]/DiagnosticReport?category=LAB&patient=17e77411359-8837d878-ea1e-45b5-bb89-882dfb2be4b](https://[Base_URL]/DiagnosticReport?category=LAB&patient=17e77411359-8837d878-ea1e-45b5-bb89-882dfb2be4b)
[https://\[Base_URL\]/DiagnosticReport?category=LAB&patient=Patient/17e77411359-8837d878-ea1e-45b5-bb89-882dfb2be4b](https://[Base_URL]/DiagnosticReport?category=LAB&patient=Patient/17e77411359-8837d878-ea1e-45b5-bb89-882dfb2be4b)

Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "019290b1-c4e1-4025-862c-60ffc3a6160b",
  "type":
  "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-
server/DiagnosticReport?_count=10&category=http://terminology.hl7.org/CodeSystem/v2
-0074%7CLAB&patient=17e77411359- 8837d878-ea1e-45b5-bb89-882dfb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e7b7b7e66-36f4cf84-3482-4e36-8cca-13cc832b3bed",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-
server/DiagnosticReport/17e7b7b7e66-36f4cf84-3482-4e36-8cca- 13cc832b3bed", "resource": {
        "resourceType": "DiagnosticReport",
        "id": "17e7b7b7e66-36f4cf84-3482-4e36-8cca-
13cc832b3bed", "meta": {
          "versionId": "1",
          "lastUpdated": "2022-01-21T07:13:17.926Z",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-diagnosticreport-lab"
          ]
        },
        "status":
        "final",
        "category":
        [
          {

```

```

"coding": [
  {
    "system":
      "http://terminology.hl7.org/CodeSystem/v2-
0074", "code": "LAB",
    "display": "Laboratory"
  }
]
},
"code": {
  "coding": [
    {
      "system":
        "http://loinc.org",
      "code": "51990-0",
      "display": "Basic Metabolic Panel"
    }
  ],
  "text": "Basic Metabolic Panel"
},
"subject": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdfb2be4b"
},
"encounter": {
  "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
},
"effectiveDateTime": "2017-09-
28T19:33:18-04:00", "issued": "2017-
09-28T19:33:18.715-04:00",
"performer": [
  {
    "reference": "Organization/17e774dca91-e7e4e9e3-390e-
4c10-83ae-88beabc176e2", "display": "PCP170967"
  },
  {
    "reference": "Practitioner/17e774bb850-6b7b7f50-ed52-4523-a3a8-60fb0ef71c5b"
  },
  {
    "reference": "Organization/17e774dca91-e7e4e9e3-390e-4c10-83ae-88beabc176e2"
  }
],
"result": [
  {
    "reference": "Observation/17e77809e90-d5cfd26d-ab5d-4f36-
bc32-1ee799b2c278", "display": "Glucose"
  },
  {
    "reference": "Observation/17e7785ea69-6c9f88d9-0553-
4216-be17-f908ebe0b371", "display": "Urea Nitrogen"
  }
]
},
"search": {
"mode":

```

```
"match",  
  "score": 1  
}  
]  
}
```

Request: Encounter

GET https://[Base_URL]/Encounter?patient=[id]
e.g. https://[Base_URL]/Encounter?patient=17e77411359-8837d878-
ea1e-45b5-bb89-882dfdb2be4b Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "81bb6944-ca6b-4ecb-85aa-00c7a20adaaa", "type":
  "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-
server/Encounter?_count=10&patient=17e77411359-8837d878-ea1e-45b5-bb89-
882dfdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e7b8b62f8-a4f77df6-b97e-4ece-82ff-36480c9cc38c",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-
server/Encounter/17e7b8b62f8-a4f77df6-b97e-4ece-82ff- 36480c9cc38c",
      "resource": {
        "resourceType": "Encounter",
        "id": "e82e7a4a-7d4a-4bd3-9c59-
bd8b896b200d", "meta": {
          "versionId": "1",
          "lastUpdated": "2025-12-05T16:33:11.178+00:00",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-encounter"
          ]
        },
        "text": {
          "status": "generated",
          "div": "<div xmlns='http://www.w3.org/1999/xhtml'><table style='width:100%;'
border='1'><thead><tr><th>Start Time</th><th>End Time</th><th>Visit Type</th><th>Provider
Name</th><th>Location</th></tr></thead><tbody><tr><td>02/04/2020 10:00
AM</td><td></td><td>Consultation</td><td>Kumara
Prathipati</td><td>EUCLID</td></tr></tbody></table></div>"
        },
        "identifier": [
          {
            "system":
            "urn:oid:2.16.840.1.113883.3.8138.
1.2", "value": "5172062222483456-
1-40949-186825"
          }
        ],
        "status": "in-
progress", "class": {
```

```

"system":
"http://terminology.hl7.org/CodeSystem/v3-
ActCode", "code": "AMB",
"display": "ambulatory"
},
"type": [
{
"coding": [
{
"system":
"http://snomed.info/sct",
"code": "11429006",
"display": "Consultation"
}
]
}
],
"subject": {
"reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b"
},
"participant": [
{
"type": [
{
"coding": [
{
"system":
"http://terminology.hl7.org/CodeSystem/participan
trole", "code": "PPRF",
"display": "primary performer"
}
]
}
],
"period": {
"start": "2020-02-04T18:00:00.000Z",
"end": "2020-02-04T18:30:00.000Z"
},
"individual": {
"reference": "Practitioner/ba175fe9-ef73-43a3-85c3-e2d5f43ee3b9"
}
},
"period": {
"start": "2020-02-04T18:00:00.000Z"
},
"reasonCode": [
{
"coding": [
{
"system":
"http://snomed.info/sct",
"code": "65363002",
"display": "Otitis media"
}
]
}
]
}

```

```
],
"reasonReference": [
  {
    "reference": "Condition/d17a2ea5-2c14-4515-8812-25e18979d3f5"
  }
],
"hospitalization": {
  "dischargeDisposition": {
    "coding": [
      {
        "system":
          "https://www.nubc.org/CodeSystem/PatDischargeStatus", "code": "01",
        "display": "Discharged to Home"
      }
    ]
  }
},
"location": [
  {
    "location": {
      "reference": "Location/0c9337a0-aa82-45c5-8dab-4a8de9e07c83"
    }
  }
],
"serviceProvider": {
  "reference": "Organization/7ab65004-5b3b-4135-87c2-8c2b6fb87042"
}
},
"search": {
  "mode": "match"
}
}
]
```

Request: GOAL

GET https://[Base_URL]/Goal?patient=[id]
e.g. https://[Base_URL]/Goal?patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "6f2db230-b4f4-4447-856b-3f398377a95f",
  "type":
  "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-server/Goal?_count=10&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e7b8b62f8-a4f77df6-b97e-4ece-82ff-36480c9cc38c",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Goal/17e7b8b62f8-a4f77df6-b97e-4ece-82ff-36480c9cc38c", "resource": {
        "resourceType": "Goal",
        "id": "17e7b8b62f8-a4f77df6-b97e-4ece-82ff-36480c9cc38c", "meta": {
          "versionId": "1",
          "lastUpdated": "2022-01-21T07:30:39.48Z",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-goal"
          ]
        },
        "lifecycleStatus":
        "active",
        "description": {
          "coding": [
            {
              "system":
              "http://snomed.info/sct",
              "code": "281004",
              "display": "Alcoholic dementia"
            }
          ],
          "text": "Alcoholic dementia"
        },
        "subject": {
          "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b"
        },
        "target": [
          {
            "dueDate": "2020-12-07"
          }
        ]
      }
    }
  ],
}
```

```
"search": {  
  "mode":  
  "match",  
  "score": 1  
}  
]  
}
```

Request: Immunization

GET https://[Base_URL]/Immunization?patient=[id]
e.g. https://[Base_URL]/Immunization?patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "206f31dc-9636-4e6f-a652-40c307eebe40",
  "type":
  "searchset",
  "total": 2,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-
server/Immunization?_count=10&patient=Patient/17e77411359-8837d878- ea1e-45b5- bb89-
882fdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e7b8dc9ab-8abc85e3-0ab1-470f-ae8-1f4e9a3597bb",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Immunization/17e7b8dc9ab-
8abc85e3-0ab1-470f-ae8-1f4e9a3597bb", "resource": {
        "resourceType": "Immunization",
        "id": "17e7b8dc9ab-8abc85e3-0ab1-470f-
ae8-1f4e9a3597bb", "meta": {
          "versionId": "1",
          "lastUpdated": "2022-01-21T07:33:16.843Z",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-immunization"
          ]
        },
        "status": "not-
done",
        "statusReason
": { "coding": [
          {
            "system":
            "http://terminology.hl7.org/CodeSystem/v3-
ActReason", "code": "OSTOCK",
            "display": "product out of stock"
          }
        ]
      },
        "text": "product out of stock"
      },
      "vaccineCo
de": {
        "coding": [
          {
            "system":
            "http://terminology.hl7.org/CodeSystem/data-
absent-reason", "code": "unknown",
            "display": "Unknown"
          }
        ]
      }
    }
  ]
}
```

```

    }
  ],
  "text": "Unknown"
},
"patient": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b"
},
"encounter": {
  "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
},
"occurrenceString": "1946-08-29T19:33:18-04:00",
"primarySource": true,
"location": {
  "reference": "Location/17e7750e68f-6266aec8-0cd3-443e-adb9-be37f3bf25f2",
  "display": "RIVER BEND MEDICAL GROUP - CHICOPEE OFFICE - URGENT CARE"
}
},
"search": {
  "mode":
  "match",
  "score": 1
}
},
{
  "id": "17eb02c0f47-3b8a6c05-ae47-4002-9001-fd61626bfca5",
  "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Immunization/17eb02c0f47-3b8a6c05-ae47-4002-9001-fd61626bfca5", "resource": {
    "resourceType": "Immunization",
    "id": "17eb02c0f47-3b8a6c05-ae47-4002-9001-fd61626bfca5", "meta": {
      "versionId": "1",
      "lastUpdated": "2022-01-31T12:46:24.583Z",
      "profile": [
        "http://hl7.org/fhir/us/core/StructureDefinition/us-core-immunization"
      ]
    },
    "status": "not-done",
    "statusReason": {
      "coding": [
        {
          "system":
            "http://terminology.hl7.org/CodeSystem/v3-ActReason", "code": "OSTOCK",
            "display": "product out of stock"
          }
        ]
      },
    "text": "product out of stock"
  },
  "vaccineCode": {
    "coding": [
      {

```

```
"system":
  "http://terminology.hl7.org/CodeSystem/data-
  absent-reason", "code": "unknown",
  "display": "Unknown"
}
],
"text": "Unknown"
},
"patient": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882dfb2be4b"
},
"encounter": {
  "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
},
"occurrenceString": "1946-08-
29T19:33:18-04:00",
"primarySource": true,
"location": {
  "reference": "Location/17e7750e68f-6266aec8-0cd3-
443e-adb9-be37f3bf25f2", "display": "RIVER BEND
MEDICAL GROUP - CHICOPEE OFFICE - URGENT CARE"
}
},
"search": {
  "mode":
  "match",
  "score": 1
}
}
]
```

Request: Medication

GET https://[Base_URL]/MedicationRequest?patient=[id]
e.g. https://[Base_URL]/MedicationRequest?patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdfb2be4b &intent=order&status=active Response

Code: 200 (Success)

```
{
  "id": "17eb02c0f47-3b8a6c05-ae47-4002-9001-fd61626bfca5",
  "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/MedicationRequest/17eb02c0f47-3b8a6c05-ae47-4002-9001-fd61626bfca5", "resource": {
    "resourceType": "MedicationRequest",
      "id": "afb8f78e-6874-45e4-aaed-73ae3234a51f", "meta": {
        "versionId": "3",
        "lastUpdated": "2025-12-04T15:53:47.642+00:00",
        "profile": [
          "http://hl7.org/fhir/us/core/StructureDefinition/us-core-medicationrequest"
        ]
      },
      "text": {
        "status": "generated",
        "div": "<div xmlns='http://www.w3.org/1999/xhtml'><table style='width:100%;' border='1'><thead><tr><th>Drug Info</th><th>Date Rx Given</th><th>Rx Status</th><th>Rx Normcode</th><th>NDC Code</th><th>Physician Name</th></tr></thead><tbody><tr><td>vitamin B Complex Capsule Oral</td><td>2025-11-25</td><td>active</td><td>00536137801</td><td></td><td>Kumara Prathipati</td></tr></tbody></table></div>"
      },
      "identifier": [
        {
          "system":
            "urn:oid:2.16.840.1.113883.3.8138.1.2", "value": "5422858696589312-1-40949-124157"
        }
      ],
      "status": "active",
      "intent":
        "order",
      "category": [
        {
          "coding": [
            {
              "system":
                "http://terminology.hl7.org/CodeSystem/medicationrequest-category", "code": "outpatient",
              "display": "Outpatient"
            }
          ]
        }
      ]
    },
    "reportedReference": {
      "reference": "Practitioner/ba175fe9-ef73-43a3-85c3-e2d5f43ee3b9"
    }
  },
}
```

```
"medicationCodeableC
oncept": { "coding": [
  {
    "system": "https://www.fda.gov/drugs/drug-approvals-and-
databases/national-drug-code-directory", "code": "00536137801",
    "display": "vitamin B Complex Capsule Oral"
  }
],
"text": "vitamin B Complex Capsule Oral"
},
"subject": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-
bb89-882fdfb2be4b", "display": "Fhir, Henry"
},
"encounter": {
  "reference": "Encounter/e82e7a4a-7d4a-4bd3-9c59-bd8b896b200d"
},
"authoredOn": "2025-
11-25", "requester": {
  "reference": "Practitioner/ba175fe9-ef73-43a3-
85c3-e2d5f43ee3b9", "display": "Kumara
Prathipati"
},
"reasonCode": [
  {
    "coding": [
      {
        "system":
        "http://snomed.info/sct",
        "code": "65363002",
        "display": "Otitis media"
      }
    ],
    "text": "Ear infection"
  }
],
"reasonReference": [
  {
    "reference": "Condition/532f7c35-f909-4753-aed3-9bdbe7f5fe24"
  }
],
"dosageInstruction": [
  {
    "extension": [
      {
        "url": "http://hl7.org/fhir/ValueSet/timing-abbreviation",
        "valueCodeableConcept": {
          "coding": [
            {
              "system": "http://terminology.hl7.org/CodeSystem/v3-
GTSAbbreviation", "code": "QD",
              "display": "QD"
            }
          ]
        }
      }
    ]
  }
]
```

```
],
"text": "Take 1 tablet by mouth
once daily", "timing": {
  "repeat": {
    "frequency":
      1,
    "period": 1,
    "periodUnit": "d"
  }
},
"doseAndRate": [
  {
    "doseQuantit
y": {
      "value": 1,
      "unit":
        "tablet",
      "system":
        "http://unitsofmeasure.org",
      "code": "{tbl}"
    }
  }
]
},
],
"dispenseRequest": {
  "numberOfRepeatsAllowe
d": 3, "quantity": {
    "value": 30,
    "unit":
      "tablets",
    "system":
      "http://unitsofmeasure.org",
    "code": "{tbl}"
  },
  "expectedSupplyDura
tion": { "value": 30,
    "unit": "days",
    "system":
      "http://unitsofmeasure.org",
    "code": "d"
  }
},
},
"search": {
  "mode": "match"
}
}
```

Request: Pregnancy Status

GET https://[Base_URL]/Observation?patient=[id]
e.g. https://[Base_URL]/Observation?code= 82810-3&patient=Patient/17e77411359-8837d878- ea1e-45b5-bb89-882dfdb2be4b
Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "f4310d27-2447-4466-8fd5-35319e25fa02",
  "type":
  "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-server/ Observation?code=82810-3&patient=17e77411359-8837d878-ea1e-45b5-bb89- 882dfdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e7b8b62f8-a4f77df6-b97e-4ece-82ff-36480c9cc38c",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation/17e7b8b62f8-a4f77df6-b97e-4ece-82ff- 36480c9cc38c",
      "resource": {
        "resourceType": "Observation",
        "id": "8705d0c3-fada-4a4d-b8c7-a467f889b974", "meta": {
          "versionId": "1",
          "lastUpdated": "2025-11-28T16:20:23.463+00:00",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-observation-pregnancystatus"
          ]
        },
        "status":
        "final",
        "category"
        : [
          {
            "coding": [
              {
                "system":
                "http://terminology.hl7.org/CodeSystem/observatio
                n-category", "code": "social-history",
                "display": "Social History"
              }
            ],
            "text": "Social History"
          }
        ],
        "code": {
          "coding": [
            {
```

```

    "system":
      "http://loinc.org",
      "code": "82810-3",
      "display": "Pregnancy status"
    }
  ],
  "text": "Pregnancy Status"
},
"subject": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b"
},
"effectiveDateTime": "2023-11-15T10:39:52+00:00", "performer": [
  {
    "reference": "Practitioner/ba175fe9-ef73-43a3-85c3-e2d5f43ee3b9"
  }
],
"valueCodeableConcept": {
  "coding": [
    {
      "system": "http://snomed.info/sct",
      "version": "http://snomed.info/sct/731000124108",
      "code": "77386006",
      "display": "Pregnant"
    }
  ]
},
"text": "Pregnant"
}
},
"search": {
  "mode": "match"
}
}
]
}

```

Request: Occupation

GET [https://\[Base_URL\]/Observation?patient=\[id\]](https://[Base_URL]/Observation?patient=[id])
 e.g. [https://\[Base_URL\]/Observation?code=11341-5&patient=Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b](https://[Base_URL]/Observation?code=11341-5&patient=Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b)
 Response

Code: 200 (Success)

```

{
  "resourceType": "Bundle",
  "id": "4de016f4-18d5-47f7-aeb7-aa642d3c6e3b", "type": "searchset",
  "total": 1,

```

```

"link": [
  {
    "relation": "self",
    "url": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation?code=11341-5&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdfb2be4b&_page=1"
  }
],
"entry": [
  {
    "id": "17e7b8b62f8-a4f77df6-b97e-4ece-82ff-36480c9cc38c",
    "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation/17e7b8b62f8-a4f77df6-b97e-4ece-82ff-36480c9cc38c",
    "resource": {
      "resourceType": "Observation",
      "id": "6129eae4-2d8a-4cb2-b340-77679d2c6362",
      "meta": {
        "versionId":
          "9",
        "lastUpdated": "2025-12-01T15:40:57.829+00:00",
        "profile": [
          "http://hl7.org/fhir/us/core/StructureDefinition/us-core-observation-occupation"
        ]
      },
      "status": "final",
      "category": [
        {
          "coding": [
            {
              "system":
                "http://terminology.hl7.org/CodeSystem/observation-category", "code": "social-history"
            }
          ]
        }
      ],
      "code": {
        "coding": [
          {
            "system":
              "http://loinc.org",
            "code": "11341-5",
            "display": "History of Occupation"
          }
        ]
      },
      "subject": {
        "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdfb2be4b"
      }
    }
  }
]

```

```
"effectiveDateTime": "2024-08-12T09:00:00Z", "performer": [
  {
    "reference": "Practitioner/ba175fe9-ef73-43a3-85c3-e2d5f43ee3b9"
  }
],
"valueCodeableConcept": {
  "coding": [
    {
      "system":
        "http://terminology.hl7.org/CodeSystem/PHOccupationalDataForHealthODH", "code": "31-1014.00.007136",
      "display": "Certified Nursing Assistant (CNA) [Nursing Assistants]"
    }
  ]
},
"component": [
  {
    "code": {
      "coding": [
        {
          "system":
            "http://loinc.org",
          "code": "86188-0",
          "display": "History of Occupation Industry"
        }
      ]
    }
  },
  {
    "code": {
      "coding": [
        {
          "system":
            "http://terminology.hl7.org/CodeSystem/PHOccupationalDataForHealthODH", "code": "621610.008495",
          "display": "Home nursing services"
        }
      ]
    }
  }
],
"search": {
  "mode": "match"
}
]
```

Request: Smoking Status

GET [https://\[Base_URL\]/Observation?code=72166-2&patient=\[id\]](https://[Base_URL]/Observation?code=72166-2&patient=[id])

e.g. [https://\[Base_URL\]/Observation?code=72166-2&patient=17e77411359-8837d878-ea1e-45b5-bb89-882dfdb2be4b](https://[Base_URL]/Observation?code=72166-2&patient=17e77411359-8837d878-ea1e-45b5-bb89-882dfdb2be4b)

Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "2ea85043-b450-40f1-8d2d-751af1c10abb", "type": "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation?_count=10&code=72166-2&patient=17e77411359-8837d878-ea1e-45b5-bb89-882dfdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e7ba24dee-bf67ef6b-6419-4c7c-b905-a107b26bf8fb",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Procedure/17e7ba24dee-bf67ef6b-6419-4c7c-b905-a107b26bf8fb",
      "resource": {
        "resourceType": "Observation",
        "id": "17e77809e90-d5cfd26d-ab5d-4f36-bc32-1ee799b2c278",
        "meta": {
          "versionId": "1",
          "lastUpdated": "2022-01-20T12:40:24.976Z",
          "profile": [
            "http://hl7.org/fhir/us/core/StructuredDefinition/us-core-smokingstatus"
          ]
        },
        "status": "final",
        "category": [
          {
            "coding": [
              {
                "system": "http://terminology.hl7.org/CodeSystem/observation-category",
                "code": "survey",
                "display": "survey"
              }
            ]
          }
        ],
        "code": {
          "coding": [
            {
```

```
"system":
  "http://loinc.org",
  "code": "72166-2",
  "display": "Tobacco smoking status NHIS"
},
"text": "Tobacco smoking status NHIS"
},
"subject": {
  "reference": "Patient/17e77411359-
8837d878-ea1e- 45b5-bb89-
882fdb2be4b"
},
"encounter": {
  "reference":
  "Encounter/17e77566282-
0c9c236b- f0bd-45e0-9c61-
80991a376967"
},
"effectivePeriod": {
  "start": "1940-09-05T19:33:18-04:00",
  "end": "1940-09-05T20:33:18-04:00"
},
"issued": "1940-09-05T19:33:18.715-04:00",
"valueCodeableConcept": {
  "coding": [
    {
      "system":
        "http://snomed.info/sct",
        "code": "266919005",
        "display": "Never smoker"
    }
  ],
  "text": "Never smoker"
}
}
```

```
search":
{
  "mode":
  "match",
  "score": 1
}
]
}
```

Request: Procedure

GET https://[Base_URL]/Procedure?patient=[id]
e.g. https://[Base_URL]/Procedure?patient=17e77411359-8837d878-ea1e-45b5-bb89-882dfb2be4b

Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "ed4425dd-7479-4b52-b404-502697281ee0",
  "type":
  "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-
server/Procedure?_count=10&patient=17e77411359-8837d878-ea1e-45b5-bb89-
882dfb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e7ba24dee-bf67ef6b-6419-4c7c-b905-a107b26bf8fb",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-
server/Procedure/17e7ba24dee-bf67ef6b-6419-4c7c-b905- a107b26bf8fb",
      "resource": {
        "resourceType": "Procedure",
        "id": "17e7ba24dee-bf67ef6b-6419-4c7c-b905-
a107b26bf8fb", "meta": {
          "versionId": "1",
          "lastUpdated": "2022-01-21T07:55:41.422Z",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-procedure"
          ]
        },
        "status":
        "completed",
        "code": {
          "coding": [
            {
              "system":
              "http://snomed.info/sct",
              "code": "430193006",
              "display": "Medication Reconciliation (procedure)"
            }
          ]
        },
        "text": "Medication Reconciliation (procedure)"
      },
      "subject": {
        "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882dfb2be4b"
      },
      "encounter": {
        "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
      }
    }
  ]
}
```

```
},
"performedDateTime": "1941-02-
13T18:33:18-05:00", "location": {
  "reference": "Location/17e7750e68f-6266aec8-0cd3-
443e-adb9-be37f3bf25f2", "display": "PCP170967"
}
},
"search": {
  "mode":
  "match",
  "score": 1
}
}
]
```

Request: Related Person

GET https://[Base_URL]/RelatedPerson?patient=[id]

e.g. https://[Base_URL]/RelatedPerson?patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b

Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": " d93603b5-dc30-40fe-9cc8-
b88349d0d03b", "type": "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-
server/RelatedPerson?_count=10&patient=17e77411359-8837d878-ea1e-45b5-bb89-
882fdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": " 17e7ba24dee-bf67ef6b-6419-4c7c-b905-a107b26bf8fb",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-
server/RelatedPerson/17e7ba24dee-bf67ef6b-6419-4c7c-b905- a107b26bf8fb",
      "resource": {
        "resourceType": "RelatedPerson",
        "id": "51ee79d7-1ce4-423f-b6ff-
8924666a27ea", "meta": {
          "versionId": "1",
          "lastUpdated": "2025-11-25T11:52:23.773+00:00",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-relatedperson"
          ]
        },
        "text": {
          "status": "generated",
          "div": "<div xmlns='http://www.w3.org/1999/xhtml'><table style='width:100%;'
border='1'><thead><tr><th>Related Person
Name</th><th>Gender</th><th>Relationship</th><th>Telecom</th><th>Address</th></tr></thead><tbody
><tr><td>Brooke William</td><td>male</td><td>Father</td><td>Home: 846-546-9646 | Mobile: 548-
764-5467</td><td>502 Euclid Ave, Suite 203</td></tr></tbody></table></div>"
        },
        "identifier": [
          {
            "system":
              "urn:oid:2.16.840.1.113883.3.8138.1.2
", "value": "6199889017372672-1-
40949-40956"
          }
        ],
        "active":
          true,
        "patient"
      : {
```

```
"reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b", "display": "Henry Fhir"
},
"relationship": [
  {
    "coding": [
      {
        "system":
        "http://terminology.hl7.org/CodeSystem/v3-RoleCode", "code": "FTH",
        "display": "Father"
      }
    ]
  }
],
"name": [
  {
    "use": "usual",
    "family":
    "William",
    "given": [
    "Brooke"
    ]
  }
],
"telecom": [
  {
```

```
"system": "phone",
"value": "846-546-9646",
"use": "home"
},
{
  "system": "phone",
  "value": "548-764-5467",
  "use": "mobile"
}
],
"gender":
"male",
"address": [
  {
    "use":
      "home",
    "line": [
      "502 Euclid Ave, Suite 203"
    ],
    "city": "National
City", "state":
"CA",
    "postalCode": "91950-2988"
  }
]
},
"search": {
  "mode": "match"
}
}
]
}
```

Request: Provenance

GET https://[Base_URL]/Provenance/[id] e.g.

https://[Base_URL]/Provenance/17e8adbdd12-21675728-3f52-4320-8b3b-d5977915336c Response

Code: 200 (Success)

```
{
  "resourceType": "Provenance",
  "id": "17e8adbdd12-21675728-3f52-4320-8b3b-d5977915336c",
  "meta": {
    "versionId": "5",
    "lastUpdated": "2022-01-31T12:51:12.934Z",
    "profile": [
      "http://hl7.org/fhir/us/core/StructureDefinition/us-core-provenance"
    ]
  },
  "target": [
    {
      "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b"
    },
    {
      "reference": "Location/17e7750e68f-6266aec8-0cd3-443e-adb9-be37f3bf25f2"
    },
    {
      "reference": "Organization/17e774dca91-e7e4e9e3-390e-4c10-83ae-88beabc176e2"
    },
    {
      "reference": "Practitioner/17e774bb850-6b7b7f50-ed52-4523-a3a8-60fb0ef71c5b"
    },
    {
      "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
    },
    {
      "reference": "AllergyIntolerance/17e7758c319-7955ecfe-94da-4071-8488-4ef21425ed85"
    },
    {
      "reference": "CareTeam/17e775e7546-36e6a4cd-264e-4a94-92fa-cdf1b2fa30c1"
    },
    {
      "reference": "CarePlan/17e776e13ff-1ea7505d-f475-4f49-adde-30e69df86734"
    },
    {
      "reference": "Condition/17e7777ce8c-c66752fb-ee1b-40c2-ba5a-2e6ee89b3e1a"
    },
    {
      "reference": "Condition/17eb029f925-40603327-0ac3-48dd-972b-6c882b8751f5"
    },
    {
      "reference": "Device/17e777b3f34-04bc3627-92d3-43bb-92e7-35533110f750"
    },
    {
      "reference": "Observation/17e77809e90-d5cfd26d-ab5d-4f36-bc32-1ee799b2c278"
    }
  ]
}
```

```
},
{
  "reference": "Observation/17e7785ea69-6c9f88d9-0553-4216-be17-f908ebe0b371"
},
{
  "reference": "Observation/17e778a9113-66c19e50-1b3f-41fd-a4da-ef86393fb0b2"
},
{
  "reference": "Observation/17e778d42db-92528d6f-7103-40fb-99ca-b2ac8837210d"
},
{
  "reference": "Observation/17e7791dd19-11eaf5c1-a5c0-429c-9867-f3110c743572"
},
{
  "reference": "Observation/17e77947034-7677a2e6-33af-4e06-83ae-a6727ac79885"
},
{
  "reference": "Observation/17e7797685b-e707227d-0cb5-4b28-bab2-ca1f4a1ba111"
},
{
  "reference": "Observation/17e7799a564-8f9ed437-d396-46bf-8f68-bf728955654c"
},
{
  "reference": "Observation/17e779bc672-37c76705-1f73-4531-bfcb-ee3cd3e25bfd"
},
{
  "reference": "Observation/17e77a065f3-77947ea0-1b53-47a5-9a9e-10f6e169f292"
},
{
  "reference": "Observation/17e77a29d41-85ec6814-a99a-4a73-ae02-f6a494a11468"
},
{
  "reference": "Observation/17e77a53c30-b356fe0d-d90b-42ed-91f9-5ed08c8047ca"
},
{
  "reference": "Observation/17e7c606d8a-9aeab44c-0261-465d-8930-4a218b201bf5"
},
{
  "reference": "DiagnosticReport/17e7b6e6f1c-119e9b8b-11b9-448b-b760-dc116013b654"
},
{
  "reference": "DiagnosticReport/17e7b741f29-4b6b813d-d11e-4597-8178-5bc5996ac4e4"
},
{
  "reference": "DiagnosticReport/17e7b7b7e66-36f4cf84-3482-4e36-8cca-13cc832b3bed"
},
{
  "reference": "DiagnosticReport/17e7d0e6d1d-c0e0136b-81d4-4164-a8b8-863694276a4f"
},
{
  "reference": "DocumentReference/17e7b838c61-4be99b80-0f94-4b26-a086-a30ed78c91ce"
},
{
  "reference": "DocumentReference/17e7d144d28-7d79ed3e-ca9e-400d-a9ed-add23f5cef07"
},
}
```

```
{
  "reference": "DocumentReference/17e7d19866c-dbbaa2e9-4d81-44bb-af5d-ec2e829e9c72"
},
{
  "reference": "DocumentReference/17e7d1c49cd-bfb30b25-9f98-40c7-9d94-977b7b803f21"
},
{
  "reference": "DocumentReference/17e7d24c947-205cd8e5-3a93-4ab9-8662-5e92b0080af7"
},
{
  "reference": "Goal/17e7b8b62f8-a4f77df6-b97e-4ece-82ff-36480c9cc38c"
},
{
  "reference": "Immunization/17e7b8dc9ab-8abc85e3-0ab1-470f-ae8-1f4e9a3597bb"
},
{
  "reference": "Immunization/17eb02c0f47-3b8a6c05-ae47-4002-9001-fd61626bfca5"
},
{
  "reference": "Medication/17e7b8f47d0-2bf2943a-123e-4725-b5dd-f5200df6c3a2"
},
{
  "reference": "MedicationRequest/17e7b94dd8d-d3b0e43a-de55-4822-8bb5-07e5fd6177d9"
},
{
  "reference": "MedicationRequest/17e7b990c43-4525f6a4-81a0-40f7-97c7-7dbebff6e34b"
},
{
  "reference": "MedicationRequest/17e7b9b263e-9cd8f64f-f7e1-447e-8583-a753342d13c6"
},
{
  "reference": "MedicationRequest/17e7ba05cb1-0a5defbd-deb9-4792-9952-8f7f0e5bc74b"
},
{
  "reference": "Procedure/17e7ba24dee-bf67ef6b-6419-4c7c-b905-a107b26bf8fb"
},
{
  "reference": "Observation/17e81e97c4b-ea761488-0b67-43d0-a0d7-346dea549bee"
},
{
  "reference": "Observation/17e81ebac04-75d9f0f2-fcb2-4e2f-9c22-87fb7ddf5f5e"
},
{
  "reference": "Observation/17e81ed9c56-bcda0427-df92-4b58-b3ae-ac11c22f4d7d"
},
{
  "reference": "Observation/17e81ef5b5e-40df3e7d-19bc-4c2a-94bc-9a04ff93537c"
},
{
  "reference": "Observation/17e81f0fd34-6fc95b32-8346-4aec-9de3-072d12c992a5"
},
{
  "reference": "Observation/17e81f291e7-c99c91ac-57dd-47f6-b7f7-a365d2c087d7"
},
{

```

```

"reference": "Observation/17e81f4a61d-ff3926f2-e35b-466a-bb6c-62a061425258"
},
{
  "reference": "Observation/17e8501692e-8c2d145f-fb69-4ae3-85d1-ef31ebf4a6a2"
},
{
  "reference": "Observation/17e8502f180-3c7e4770-3630-4654-922a-3f802c2939b1"
}
],
"recorded": "2020-12-10T18:33:18.715-05:00",
"agent": [
  {
    "type": {
      "coding": [
        {
          "system":
            "http://terminology.hl7.org/CodeSystem/provenance-
            participant-type", "code": "author",
          "display": "Author"
        }
      ],
      "text": "Author"
    },
    "who": {
      "reference": "Practitioner/17e774bb850-6b7b7f50-ed52-4523-
      a3a8-60fb0ef71c5b", "display": "Dr. Blossom971
      Christiansen251"
    },
    "onBehalfOf": {
      "reference": "Organization/17e774dca91-e7e4e9e3-390e-4c10-
      83ae-88beabc176e2", "display": "PCP170967"
    }
  },
  {
    "type": {
      "coding": [
        {
          "system": "http://hl7.org/fhir/us/core/CodeSystem/us-core-
          provenance-participant-type", "code": "transmitter",
          "display": "Transmitter"
        }
      ],
      "text": "Transmitter"
    },
    "who": {
      "reference": "Practitioner/17e774bb850-6b7b7f50-ed52-4523-
      a3a8-60fb0ef71c5b", "display": "Dr. Blossom971
      Christiansen251"
    },
    "onBehalfOf": {
      "reference": "Organization/17e774dca91-e7e4e9e3-390e-4c10-
      83ae-88beabc176e2", "display": "PCP170967"
    }
  }
]
}

```

Request: Vital Signs

patient + code: GET [https://\[Base_URL\]/Observation?code=85354-9&patient=\[id\]](https://[Base_URL]/Observation?code=85354-9&patient=[id])
patient + category + date : GET [https://\[Base_URL\]/Observation?category=vital-signs&date=\[leYYYY-MM-DD\] &patient=\[id\]](https://[Base_URL]/Observation?category=vital-signs&date=[leYYYY-MM-DD] &patient=[id]) e.g.
[https://\[Base_URL\]/Observation?code=85354-9&patient=Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b](https://[Base_URL]/Observation?code=85354-9&patient=Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b) [https://\[Base_URL\]/Observation?code=85354-9&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b](https://[Base_URL]/Observation?code=85354-9&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b) [https://\[Base_URL\]/Observation?category=vital-signs&date=gt1994-05-18T19:33:18-04:00&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b](https://[Base_URL]/Observation?category=vital-signs&date=gt1994-05-18T19:33:18-04:00&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b)

Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": "231df7ad-8e46-4371-99cc-4ce0dc9c5cb0", "type": "searchset",
  "total": 6,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation?_count=10&category=vital-signs&date=gt1994-05-18T19:33:18-04:00&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e7797685b-e707227d-0cb5-4b28-bab2-ca1f4a1ba111",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation/17e7797685b-e707227d-0cb5-4b28-bab2-ca1f4a1ba111", "resource": {
        "resourceType": "Observation",
        "id": "17e7797685b-e707227d-0cb5-4b28-bab2-ca1f4a1ba111", "meta": {
          "versionId": "1",
          "lastUpdated": "2022-01-20T13:05:18.427Z",
          "profile": [
            "http://hl7.org/fhir/StructureDefinition/bodytemp",
            "http://hl7.org/fhir/StructureDefinition/vitalsigns"
          ]
        },
        "status": "final",
        "category": [
          {
            "coding": [
              {
                "system": "http://terminology.hl7.org/CodeSystem/observation-category", "code": "vital-signs", "display": "vital-signs"
              }
            ]
          }
        ]
      }
    }
  ]
}
```

```

    }
  ],
  "code": {
    "coding": [
      {
        "system":
          "http://loinc.org",
        "code": "8310-5",
        "display": "Body temperature"
      },
      {
        "system":
          "http://loinc.org",
        "code": "8331-1",
        "display": "Oral temperature"
      }
    ],
    "text": "Body temperature"
  },
  "subject": {
    "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882dfdb2be4b"
  },
  "encounter": {
    "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
  },
  "effectiveDateTime": "2009-08-19T19:33:18-04:00", "issued": "2009-08-19T19:33:18.715-04:00",
  "valueQuantity": {
    "value": 37.799,
    "unit": "Cel",
    "system":
      "http://unitsofmeasure.org",
    "code": "Cel"
  }
},
"search": {
  "mode":
    "match",
  "score": 1
}
},
{
  "id": "17e7799a564-8f9ed437-d396-46bf-8f68-bf728955654c",
  "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation/17e7799a564-8f9ed437-d396-46bf-8f68- bf728955654c",
  "resource": {
    "resourceType": "Observation",
    "id": "17e7799a564-8f9ed437-d396-46bf-8f68-bf728955654c",
    "meta": {
      "versionId": "1",
      "lastUpdated": "2022-01-20T13:07:45.124Z",

```

```

"profile": [
  "http://hl7.org/fhir/StructureDefinition/bp",
  "http://hl7.org/fhir/StructureDefinition/vitalsigns"
],
"status": "final",
"category": [
  {
    "coding": [
      {
        "system": "http://terminology.hl7.org/CodeSystem/observation-category",
        "code": "vital-signs",
        "display": "vital-signs"
      }
    ]
  }
],
"code": {
  "coding": [
    {
      "system": "http://loinc.org",
      "code": "85354-9",
      "display": "Blood Pressure"
    }
  ],
  "text": "Blood Pressure"
},
"subject": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdfb2be4b"
},
"encounter": {
  "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
},
"effectiveDateTime": "1994-05-19T19:33:18-04:00",
"issued": "1994-05-19T19:33:18.715-04:00",
"component": [
  {
    "code": {
      "coding": [
        {
          "system": "http://loinc.org",
          "code": "8462-4",
          "display": "Diastolic Blood Pressure"
        }
      ],
      "text": "Diastolic Blood Pressure"
    }
  }
],
"valueQuantity": {

```

```

    "value": 85,
    "unit":
    "mm[Hg]",
    "system":
    "http://unitsofmeasure.org",
    "code": "mm[Hg]"
  }
},
{
  "code": {
    "coding": [
      {
        "system":
        "http://loinc.org",
        "code": "8480-6",
        "display": "Systolic Blood Pressure"
      }
    ],
    "text": "Systolic Blood Pressure"
  },
  "valueQuantity": {
    "value": 129,
    "unit":
    "mm[Hg]",
    "system": "http://unitsofmeasure.org",
    "code": "mm[Hg]"
  }
}
],
},
"search": {
  "mode":
  "match",
  "score": 1
}
},
{
  "id": "17e77a29d41-85ec6814-a99a-4a73-ae02-f6a494a11468",
  "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation/17e77a29d41-85ec6814-a99a-4a73-ae02-f6a494a11468", "resource": {
    "resourceType": "Observation",
    "id": "17e77a29d41-85ec6814-a99a-4a73-ae02-f6a494a11468",
    "meta": {
      "versionId":
      "1",
      "lastUpdated": "2022-01-20T13:17:32.865Z",
      "profile": [
        "http://hl7.org/fhir/StructureDefinition/heart-rate",
        "http://hl7.org/fhir/StructureDefinition/vitalsigns"
      ]
    },
    "status":
    "final",

```

```
"category":  
[  
  {  
    "coding": [  
      {  
        "system":  
        "http://terminology.hl7.org/CodeSystem/observation  
-category", "code": "vital-signs",
```

```

      "display": "vital-signs"
    }
  ]
}
],
"code": {
  "coding": [
    {
      "system":
        "http://loinc.org",
      "code": "8867-4",
      "display": "Heart rate"
    }
  ],
  "text": "Heart rate"
},
"subject": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b"
},
"encounter": {
  "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
},
"effectiveDateTime": "2003-07-10T19:33:18-04:00", "issued": "2003-07-10T19:33:18.715-04:00",
"valueQuantity": {
  "value": 65,
  "unit":
    "/min",
  "system": "http://unitsofmeasure.org",
  "code": "/min"
}
},
"search": {
  "mode":
    "match",
  "score": 1
}
},
{
  "id": "17e81ef5b5e-40df3e7d-19bc-4c2a-94bc-9a04ff93537c",
  "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation/17e81ef5b5e-40df3e7d-19bc-4c2a-94bc-9a04ff93537c", "resource": {
    "resourceType": "Observation",
    "id": "17e81ef5b5e-40df3e7d-19bc-4c2a-94bc-9a04ff93537c", "meta": {
      "versionId": "1",
      "lastUpdated": "2022-01-22T13:17:34.43Z",
      "source":
        "#iLFSV7OLv0KF8dmQ",
      "profile": [
        "http://hl7.org/fhir/StructureDefinition/vitalsigns",
        "http://hl7.org/fhir/StructureDefinition/bodytemp"
      ]
    }
  }
}

```

```

]
},
"status":
"final",
"category":
[
{
"coding": [
{
"system":
"http://terminology.hl7.org/CodeSystem/observation-
category", "code": "vital-signs",
"display": "vital-signs"
}
]
}
],
"code": {
"coding": [
{
"system": "http://loinc.org",

"code": "8310-5",
"display": "Body temperature"
},
{
"system":
"http://loinc.org",
"code": "8331-1",
"display": "Oral temperature"
}
]
},
"text": "Body temperature"
},
"subject": {
"reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdfb2be4b"
},
"encounter": {
"reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
},
"effectiveDateTime": "2009-08-
19T19:33:18-04:00", "issued": "2009-
08-19T19:33:18.715-04:00",
"dataAbsentReason
": { "coding": [
{
"system":
"http://terminology.hl7.org/CodeSystem/data-
absent-reason", "code": "unknown",
"display": "Unknown"
}
]
},
"text": "Unknown"
}
},
"search": {
"mode":

```

```

"match",
"score": 1
}
},
{
"id": "17e81f0fd34-6fc95b32-8346-4aec-9de3-072d12c992a5",
"fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-
server/Observation/17e81f0fd34-6fc95b32-8346-4aec-9de3- 072d12c992a5",
"resource": {
"resourceType": "Observation",
"id": "17e81f0fd34-6fc95b32-8346-4aec-9de3-
072d12c992a5", "meta": {
"versionId": "1",
"lastUpdated": "2022-01-22T13:19:21.396Z",
"source":
"#iLFSV7OLvOKF8dmQ",
"profile": [
"http://hl7.org/fhir/StructureDefinition/vitalsigns",
"http://hl7.org/fhir/StructureDefinition/bp"
]
},
"status":
"final",
"category":
[
{
"coding": [
{
"system":
"http://terminology.hl7.org/CodeSystem/observation
-category", "code": "vital-signs",
"display": "vital-signs"
}
]
}
],
"code": {
"coding": [
{
"system": "http://loinc.org",
"code": "85354-9",
"display": "Blood Pressure"
}
],
"text": "Blood Pressure"
},
"subject": {
"reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882dfdb2be4b"
},
"encounter": {
"reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
},
"effectiveDateTime": "1994-05-
19T19:33:18-04:00", "issued": "1994-
05-19T19:33:18.715-04:00",
"dataAbsentReason
": { "coding": [
{

```

```
"system":
"http://terminology.hl7.org/CodeSystem/data-
absent-reason", "code": "unknown",
"display": "Unknown"
}
],
"text": "Unknown"
},
"component": [
{
"code": {
"coding": [
{
"system":
"http://loinc.org",
"code": "8462-4",
"display": "Diastolic Blood Pressure"
}
],
"text": "Diastolic Blood Pressure"
},
"dataAbsentReason": { "coding": [
{
"system":
"http://terminology.hl7.org/CodeSystem/data-
absent-reason", "code": "unknown",
"display": "Unknown"
}
],
"text": "Unknown"
}
},
{
"code": {
"coding": [
{
"system":
"http://loinc.org",
"code": "8480-6",
"display": "Systolic Blood Pressure"
}
],
"text": "Systolic Blood Pressure"
},
"dataAbsentReason": { "coding": [
{
"system":
"http://terminology.hl7.org/CodeSystem/data-
absent-reason", "code": "unknown",
"display": "Unknown"
}
],

```

```

    "text": "Unknown"
  }
}
],
},
"search": {
  "mode":
  "match",
  "score": 1
}
},
{
  "id": "17e8502f180-3c7e4770-3630-4654-922a-3f802c2939b1",
  "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation/17e8502f180-3c7e4770-3630-4654-922a-3f802c2939b1", "resource": {
    "resourceType": "Observation",
    "id": "17e8502f180-3c7e4770-3630-4654-922a-3f802c2939b1",
    "meta": {
      "versionId"
      : "1",
      "lastUpdated": "2022-01-23T03:37:49.696Z",
      "source":
      "#iLFSV7OLv0KF8dmQ",
      "profile": [
        "http://hl7.org/fhir/StructureDefinition/vitalsigns",
        "http://hl7.org/fhir/StructureDefinition/hearttrate"
      ]
    },
    "status":
    "final",
    "category":
    [
      {
        "coding": [
          {
            "system":
            "http://terminology.hl7.org/CodeSystem/observation
            -category", "code": "vital-signs",
            "display": "vital-signs"
          }
        ]
      }
    ],
    "code": {
      "coding": [
        {
          "system":
          "http://loinc.org",
          "code": "8867-4",
          "display": "Heart rate"
        }
      ],
      "text": "Heart rate"
    },
    "subject": {
      "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdfb2be4b"
    }
  }
}

```

```
},
"encounter": {
  "reference": "Encounter/17e77566282-0c9c236b-f0bd-45e0-9c61-80991a376967"
},
"effectiveDateTime": "2003-07-10T19:33:18-04:00", "issued": "2003-07-10T19:33:18.715-04:00",
"dataAbsentReason": { "coding": [
  {
    "system": "http://terminology.hl7.org/CodeSystem/data-absent-reason", "code": "unknown",
    "display": "Unknown"
  }
]
},
"text": "Unknown"
}
},
"search": {
  "mode": "match",
  "score": 1
}
}
]
```

Request: Screening Assessment Observation

GET https://[Base_URL]/Observation?patient=[id]

e.g. https://[Base_URL]/Observation?patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b

Response

Code: 200 (Success)

```
{
  "resourceType": "Bundle",
  "id": " b0a3a2a6-b8e6-4862-a247-3d1b5e7c74db", "type": "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation?_count=10&patient=17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b&_page=1"
    }
  ],
  "entry": [
    {
      "id": "17e7ba24dee-bf67ef6b-6419-4c7c-b905-a107b26bf8fb",
      "fullUrl": "https://fhirserver.ehryourway.com:9443/fhir-server/Observation/17e7ba24dee-bf67ef6b-6419-4c7c-b905- a107b26bf8fb",
      "resource": {
        "resourceType": "Observation",
        "id": "4b9d366f-9a0f-4c67-8671-9df895c6cfe9", "meta": {
          "versionId": "3",
          "lastUpdated": "2025-12-05T05:40:06.627+00:00",
          "profile": [
            "http://hl7.org/fhir/us/core/StructureDefinition/us-core-observation-screening-assessment"
          ]
        },
        "text": {
          "status": "generated",
          "div": "<div xmlns='http://www.w3.org/1999/xhtml'><table border='1' style='width:100%; border-collapse:collapse;'><thead><tr><th>Screening and Assessment Survey Code</th><th>Screening and Assessment Survey Name</th><th>Value</th></tr></thead><tbody><tr><td>44261- 6</td><td>Patient Health Questionnaire 9 item (PHQ-9) total score [Reported]</td><td>4</td></tr></tbody></table></div>"
        },
        "identifier": [
          {
            "system":
              "urn:oid:2.16.840.1.113883.3.8138.1.2"
            , "value": "6283075841884160-1-40949-59358"
          }
        ],
        "status": "final",
        "category": [
          {
            "coding": [
              {

```

```

    "system":
      "http://terminology.hl7.org/CodeSystem/observatio
n-category", "code": "survey",
      "display": "Survey"
    }
  ],
  "text": "Survey"
}
],
"code": {
  "coding": [
    {
      "system":
        "http://loinc.org",
        "code": "44261-6",
        "display": "Patient Health Questionnaire 9 item (PHQ-9) total score [Reported]"
    }
  ],
  "text": "Patient Health Questionnaire 9 item (PHQ-9) total score [Reported]"
},
"subject": {
  "reference": "Patient/17e77411359-8837d878-ea1e-45b5-bb89-882fdb2be4b"
},
"effectiveDateTime": "2020-02-04T00:00:00.000Z",
"performer": [
  {
    "reference": "Practitioner/ba175fe9-ef73-43a3-85c3-e2d5f43ee3b9"
  }
],
"valueQuantity": {
  "value": 1,
  "unit":
    "score",
  "system":
    "http://unitsofmeasure.org",
  "code": "{score}"
},
"search": {
  "mode": "match"
}
}
]
}

```

Error	Description
200 - OK	Everything worked as expected.
401 – Unauthorized	No valid Bearer token provided.
404 - Not Found	The requested resource doesn't exist.
500 - Server Error	Something went wrong on FHIR Server side.

OperationOutcome explains the error reported

Bulk Data Access (FHIR Bulk Export / SMART Backend Services)

1. Introduction

1.1 Overview

The FHIR Bulk Data Access API is used to export large volumes of FHIR resources for research, analytics, and quality improvement purposes. This document outlines the implementation of the Bulk Data Access functionality as part of our EHR Your Way product, which is designed to meet ONC G10 Certification requirements. This includes the use of SMART on FHIR for authentication and secure, patient-centric data handling.

1.2 Purpose

This guide describes how the Bulk Data API meets the ONC G10 certification criteria, ensuring compliance with the FHIR Bulk Data Export specifications. It supports:

- Patient Data Export for research and analytics
- SMART on FHIR authentication for access control
- Population Health and Quality Reporting

This feature ensures that bulk data is available for external apps and services in compliance with ONC certification.

2. Authentication & Authorization

2.1 OAuth 2.0 with SMART on FHIR

Our system uses OAuth 2.0 for authentication, ensuring that third-party applications and providers can access patient data securely. OAuth Scopes: patient/Patient.read, patient/Observation.read, group/Patient.read, etc.

Authorization Code Flow: Standard flow used for obtaining access tokens.

SMART App Launch: Support for Standalone Patient App and Provider App launch.

2.2 Access Control

Access to the Bulk Data Export API is restricted using SMART on FHIR OAuth tokens. Only authorized users with the necessary permissions are allowed to access or initiate export processes.

3. API Endpoints

The **Bulk Data Kick-off** endpoint initiates the export of FHIR resources for a specified cohort (Group) of patients.

POST {baseUrl}/Group/{GroupID}/\$export

Parameters

=====

Parameter	Description
GroupID	The FHIR Group resource ID identifying the cohort of patients for export.
_type	Comma-separated list of resource types to export (e.g., Patient, Observation).
_typeFilter	Optional filters for selecting specific resources (e.g., by date, code, or other criteria).
includeAssociatedData	Flag to include related data (e.g., Medication, AllergyIntolerance).

Headers

Accept:
application/fhir+json
Prefer: respond-
async
Authorization: Bearer {access_token}

Response (202 Accepted)

Example:

```
{
  "status": "202 Accepted",
  "content-location": "/export/status/{transactionId}"
}
```

The **Bulk Data Status Request** endpoint allows clients to check the status of a bulk data export. It informs clients whether the export is still in progress or has completed.

GET {baseUrl}/export/status/{transactionId}

Response (200 OK)

Status: The current status of the export (pending, completed, failed).

Files: URLs to download the export files, once available.

Error: In case of any issues, an error message will be provided.

Example:

```
{
  "status":
    "completed",
  "files": [
    {
      "fileType": "ndjson",
      "url": "/export/download/{fileId}"
    }
  ]
}
```

Once the export is complete, the **Bulk Data File Request** endpoint allows clients to download the export files.

GET {baseUrl}/export/download/{fileId}

Response (200 OK)

Example:

```
{
  "fileId": "12345",
  "status": "200 OK",
  "downloadUrl": "/export/download/12345"
}
```

4. Resource Types & Filters

The following **FHIR Resource Types** are supported for export:

- Patient
- Observation
- MedicationRequest
- AllergyIntolerance
- Encounter
- CarePlan
- CareTeam
- Condition
- Vital Signs
- Device

- Diagnostic Report
- Immunization
- Procedure

5. Performance & Best Practices

5.1 Bulk Data Size Considerations

Bulk data exports can generate large files. Clients should be prepared for high-volume data transfers. The system can split the export into multiple files for easier management and downloading.

5.2 Error Handling

Common errors include:

400 Bad Request: Invalid parameters or unsupported resource types.

401 Unauthorized: Invalid or expired OAuth token.

404 Not Found: Invalid GroupID or missing resources

500 Internal Server Error: Issue during export process.

6 Data Security & Privacy

6.1 Encryption

TLS 1.2+ **encryption is used for all data transfers to ensure the privacy and security of patient information during export and download.**

OAuth 2.0 tokens **must be used for secure access to sensitive data.**

6.2 Auditing and Logs

All Bulk Data Export requests are logged with detailed audit information, including:

User identity (**OAuth token**)

Requested

resources Date

and time of

request

Response status (**success or failure**)

7. Compliance with ONC G10 Certification

This API ensures compliance with ONC G10 Certification requirements, including:

- SMART on FHIR **authentication for secure access control**
- Bulk Data Export **capabilities for research and analytics**
- Audit logging **for monitoring and compliance**
- Data encryption **and access control to protect patient privacy** **FHIR Bulk Data Spec Reference**

FHIR Bulk Data Export Specification (<https://hl7.org/fhir/uv/bulkdata/STU1/>)

SMART on FHIR Overview (<https://hl7.org/fhir/smart-app-launch/STU2/>)

Profile audience and scope

This profile is intended to be used by developers of apps that need to access user identity information or other FHIR resources by requesting authorization from OAuth 2.0 compliant authorization servers.

The profile defines a method through which an app requests authorization to access a FHIR resource, and then uses that authorization to retrieve the resource. Synchronization of patient context is not addressed; for use cases that require context synchronization (e.g., learning about when the in-context patient changes within an EHR session) In other words, if the patient chart is changed during the session, the application will not inherently be updated.

The API supports all required “Must Support” elements defined by the supported US Core profiles. Optional elements and US Core choices are supported where applicable, including category and type slicing defined by the US Core Implementation Guide.

Supported US Core profiles include, but are not limited to:

- US Core Patient
- US Core AllergyIntolerance
- US Core Condition (Problems and Health Concerns)
- US Core Encounter
- US Core Immunization
- US Core Observation (Laboratory, Vital Signs, Screening Assessment)
- US Core MedicationRequest
- US Core DocumentReference
- US Core Provenance
- US Core Coverage

In addition to the data required by the US Core Implementation Guide, the API supports additional FHIR resources and observations such as Pregnancy Status, Occupation, and Smoking Status.

Security and Privacy Considerations

App Protection

The app is responsible for protecting itself from potential misbehaving or malicious values passed to its redirect URL (e.g., values injected with executable code, such as SQL) and for protecting authorization codes, access tokens, and refresh tokens from unauthorized access and use. The app developer must be aware of potential threats, such as malicious apps running on the same platform, counterfeit authorization servers, and counterfeit resource servers, and implement countermeasures to help protect both the app itself and any sensitive information it may hold. For background, see the **OAuth 2.0 Threat Model and Security Considerations** (<https://www.rfc-editor.org/rfc/rfc6819>)

Specific requirements are:

- Apps SHALL ensure that sensitive information (authentication secrets, authorization codes, tokens) is transmitted ONLY to

authenticated servers, over TLS-secured channels.

- All API endpoints enforce Transport Layer Security (TLS) version 1.2 or higher. Connections using TLS versions lower than 1.2 are rejected.
- Apps SHALL generate an unpredictable `state` parameter for each user session; SHALL include `state` with all authorization requests; and SHALL validate the `state` value for any request sent to its redirect URL.
- An app SHALL NOT execute untrusted user-supplied inputs as code.
- App SHALL NOT forward values passed back to its redirect URL to any other arbitrary or user-provided URL (a practice known as an “open redirector”).
- An app SHALL NOT store bearer tokens in cookies that are transmitted as clear text.
- Apps SHOULD persist tokens and other sensitive data in app-specific storage locations only, and SHOULD NOT persist them in system-wide-discoverable locations.

Token Revocation

The API supports OAuth 2.0 token revocation to allow authorize applications and end users to immediately terminate access to protected FHIR resources when required. Token revocation may occur due to user logout, application de-registration, security events, or administrative action.

Revocation Endpoint

The authorization server exposes a token revocation endpoint, as advertised in the SMART configuration metadata:

POST {revocation_endpoint}

Security Controls

- All revocation requests MUST be transmitted over TLS 1.2 or higher
- Client authentication is required for all revocation requests
- Revoked tokens are immediately invalidated and cannot be reused

Post-Revocation Behavior

Once a token has been revoked:

- API requests using the revoked token will return 401 Unauthorized
- Clients must re-authenticate to obtain new tokens
- No cached access is permitted after revocation

User-Initiated and Administrative Revocation

Token revocation may be initiated by:

- End users during logout or consent withdrawal
- Application developers via the revocation endpoint
- System administrators for security or compliance reasons

All revocation events are logged for audit and compliance monitoring.

Token Introspection

The authorization server supports OAuth 2.0 token introspection in accordance with RFC 7662 to validate the status and metadata of issued OAuth tokens. Token introspection is used by the Health IT Module to determine token validity, scope, audience, and expiration prior to granting access to protected FHIR resources.

Introspection Endpoint

The token introspection endpoint is exposed by the authorization server and is advertised via the SMART configuration metadata:

POST {introspection_endpoint}

Introspection Usage

Token introspection is performed by trusted internal components of the Health IT Module and is not intended for direct use by third-party client applications. All inbound API requests are validated using token signature verification and/or introspection prior to request processing.

Introspection Response Handling

The authorization server returns token metadata including, but not limited to:

- active status
- Authorized scopes
- Token expiration (exp)
- Client identifier (client_id)
- Subject and user context, where applicable

Only tokens with an active status and valid scopes are authorized for API access.

Security Controls

- Introspection requests MUST be transmitted over TLS 1.2 or higher
- Client authentication is required for all introspection requests
- Inactive, expired, or revoked tokens are denied access

Post-Introspection Enforcement

If a token is determined to be inactive, expired, or revoked:

- API requests will return 401 Unauthorized
- Clients must re-authenticate to obtain a new token

API Terms and Conditions:

The use of the EHRYourWay Clinical Web API is governed by the API Terms and Conditions available at:

<https://ehryourway.com/api-terms/>