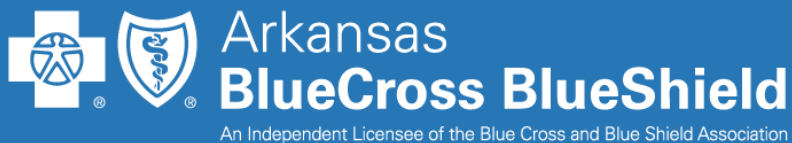


# CMS/ONC PATIENT ACCESS DEVELOPER API DOCUMENTATION



Arkansas Blue Cross and Blue Shield

# Table of Contents

1. Overview .....	2
2. Registration.....	2
3. API(s) – CARIN IG: .....	4
4. API(s) – CLINICAL US-CORE IG.....	7
5. API(s) – PDEX US DRUG FORMULARY DIRECTORY IG .....	13
6. API(s) – PDEX PROVIDER DIRECTORY IG .....	15

## 1. Overview:

### Summary Overview of ABCBS APIs

Arkansas Blue Cross Blue Shield interoperability APIs enable Arkansas Blue Cross Blue Shield members to consent to have their data shared with third-party applications. It also allows third-party application owners to connect to provider and pharmacy directories, further referred to as “public non-member specific data.”

Arkansas Blue Cross Blue Shield Interoperability APIs provide the functionality listed below:

- Enable developers to register member-facing applications
- Enable members to provide consent for an application to access their data
- Use the **HL7 FHIR** standard for member data, provider directory and the drug formulary; use the **OAuth 2.0 / Open ID Connect** standard for member authorization
- Use the **HL7 FHIR** standard for sharing public non-member specific data

*Please Note: Documented search parameters are not all inclusive, and that interested developers should request GET [base]/metadata for the full capabilities of the FHIR server.*

## 2. Registration

### Registration Authorization Form & Attestation

To get started with Arkansas Blue Cross Blue Shield FHIR APIs, please send a request to following email address: [EnterpriseIntegrationPlatforms@arkbluecross.com](mailto:EnterpriseIntegrationPlatforms@arkbluecross.com).

Please include the following information in your request:

- Company Name
- Company Address
- Point of Contact, including email, and phone.
- Short description of intent on how APIs will be used.

Once we receive the above information a member of the Arkansas Blue Cross Blue Shield team will be in contact shortly.

### Capability Statement

The capability statement is a key part of the overall conformance framework in FHIR. It is used as a statement of the features of actual software, or of a set of rules for an

application to provide. This statement connects to all the detailed statements of functionality, such as Structure Definitions and Value Sets. This composite statement of application capability may be used for system compatibility testing, code generation, or as the basis for a conformance assessment.

### Links to capability statement

- a) Sandbox: <https://apipreprod.arkbluecross.com/blueware/V1/FHIR/metadata>
- b) Production: <https://api.arkbluecross.com/blueware/V1/FHIR/metadata>

## SMART on FHIR and OIDC API

Arkansas Blue Cross and Blue Shield implements OpenID Connect (OIDC) in conjunction with the SMART on FHIR® standalone patient app launch (<http://www.hl7.org/fhir/smart-app-launch/>). The specification provides a framework for an OpenID Provider (OP) to securely convey an authenticated user's identity to relying parties (RPs), and in turn the RPs will convey the identity to the FHIR APIs.

### 1. Authentication Request

An Authentication Request is an OAuth 2.0 Authorization Request that requests that the End-User be authenticated by the Authorization Server.

- Authorize endpoints
  - Sandbox: GET  
`https://apipreprod.arkbluecross.com/oidc/oauth2/authorize?client_id={Client Key}&redirect_uri={Client's preregistered redirect uri}&response_type=code&state={Opaque value used to maintain state}&nonce={Optional case sensitive string}&scope=openid+launch/patient+patient/*.read&aud=https://apipreprod.arkbluecross.com/`
  - Production: GET  
`https://api.arkbluecross.com/oidc/oauth2/authorize?client_id={Client Key}&redirect_uri={Client's preregistered redirect uri}&response_type=code&state={Opaque value used to maintain state}&nonce={Optional case sensitive string}&scope=openid+launch/patient+patient/*.read&aud=https://api.arkbluecross.com/`

### 2. Redirect URI

Client specified redirection URI to which the OP Authentication response will be sent.

- Response query parameters in Redirect URI
  - code: Authorization Code to be exchanged for bearer token
  - state: State code value from the Authorization Request

### 3. Token Request

A client makes a Token Request by presenting its Authorization Grant (in the form of an Authorization Code) to the Token Endpoint. Among other attributes the token endpoint response body will include an access token, refresh token, and an ID JSON Web Token (JWT). The ID Token shall be submitted in the Authorization HTTP header when requesting the FHIR APIs.

- Sandbox Token endpoint
  - POST <https://apipreprod.arkbluecross.com/oidc/oauth2/token>
  - Headers
    - Accept: application/json
    - Content-Type: application/x-www-form-urlencoded
    - Authorization: Basic {Base64 Encoded Sandbox Credentials}
  - Token Request Body with Authorization Code: client\_id={Client Key}&grant\_type=authorization\_code&redirect\_uri={ Client's preregistered redirect uri }&code={Authorization Code}
  - Token Request Body with Refresh Token: client\_id={Client Key}&grant\_type=refresh\_token&refresh\_token={Refresh Token}
- Production Token endpoint
  - POST <https://api.arkbluecross.com/oidc/oauth2/token>
  - Headers
    - Accept: application/json
    - Content-Type: application/x-www-form-urlencoded
    - Authorization: Basic {Base64 Encoded Production Credentials}
  - Token Request Body with Authorization Code: client\_id={Client Key}&grant\_type=authorization\_code&redirect\_uri={ Client's preregistered redirect uri }&code={Authorization Code}
  - Token Request Body with Refresh Token: client\_id={Client Key}&grant\_type=refresh\_token&refresh\_token={Refresh Token}

## 3. API(s) – CARIN IG

### Overview

The CARIN for Blue Button® Framework enables third party applications to call FHIR APIs for returning Medicare Advantage and Part D claims and enrollment data. This implementation guide contains the specifications for the FHIR Patient, Coverage, ExplanationOfBenefit, and Organization resources profiled from CARIN IG for Blue Button® (<http://hl7.org/fhir/us/car-in-bb/index.html>).

### Resource Descriptions

**a. Patient Resource**

Demographics and other administrative information about an individual member.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/Patient/[id]

**search-type Interaction:**

GET [base]/Patient?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/Patient	Bundle all Patient resources for member in JWT id token
_id	MAY	[base]/Patient?_id=[id]	
identifier – member number	MAY	[base]/Patient?identifier=<member number>	member number - Internal member number

**b. Coverage Medical Resource**

Provides the high-level identifiers and descriptors of the specific insurance plan for a specific individual member - essentially the insurance card information.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/Coverage/[id]

**search-type Interaction:**

GET [base]/Coverage?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/Coverage	Bundle all Coverage resources for member

			in JWT id token
_id	MAY	[base]/Coverage?_id=[id]	
identifier – member number	MAY	[base]/Coverage?identifier=[member number]	member number - Internal member number
Patient	MAY	[base]/Coverage?_patient=[patient id]	Patient id in JWT id token

**c. EOB Medical Resource**

The claim and adjudication details from the processing of a Claim; no records dated prior to 2016-01-01 will be returned.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/ExplanationOfBenefit/[id]

**search-type Interaction:**

GET [base]/ExplanationOfBenefit?[parameter=value]

Parameter	Conformance	Sample Search	Notes
type	Must	[base]/ExplanationOfBenefit?type=[claim type]	claim type - <a href="https://terminology.hl7.org/2.1.0/CodeSystem-claim-type.html">https://terminology.hl7.org/2.1.0/CodeSystem-claim-type.html</a>
_id and type	MAY	[base]/ExplanationOfBenefit?_id=[id]&type=[claim type]	claim type - <a href="https://terminology.hl7.org/2.1.0/CodeSystem-claim-type.html">https://terminology.hl7.org/2.1.0/CodeSystem-claim-type.html</a>
member number identifier and type	MAY	[base]/ExplanationOfBenefit?identifier=[member number]&type=[claim type]	member number - Internal member number
_lastUpdated and type	MAY	[base]/ExplanationOfBenefit?_lastUpdated=eq[_lastUpdated]&type=[claim type]	
service-date and type	MAY	[base]/ExplanationOfBenefit?service-date=eq[service date]&type=[claim type]	
patient	MAY	[base]/ExplanationOfBenefit?patient=[patient id]	Patient id in JWT id token

**d. Organization Resource**

Payer identifiers and contact details.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/Organization/[id]

**search-type Interaction:**

GET [base]/Organization?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/Organization	Bundle all Organization resources
_id	MAY	[base]/Organization?_id=[id]	
profile	MAY	[base]/Organization?profile=http://hl7.org/fhir/us/caribbean/StructureDefinition/C4BB-Organization	For Carine BB IG Organization
name	MAY	[base]/Organization?name=Arkansas Blue Cross Blue Shield	

## 4. API(s) – CLINICAL US-CORE IG

**a. AllergyIntolerance Resource**

Risk of harmful or undesirable, physiological response which is unique to an individual member and associated with exposure to a substance.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/Allergy/Intolerance/[id]

**search-type Interaction:**

GET [base]/Allergy/Intolerance?[parameter=value]



Parameter	Conformance	Sample Search	Notes
	MAY	[base]/AllergyIntolerance	Bundle all AllergyIntolerance resources for member in JWT id token
_id	MAY	[base]/AllergyIntolerance?_id=[id]	
identifier – member number	MAY	[base]/AllergyIntolerance?identifier=[member number]	member number - Internal member number
clinical-status	MAY	[base]/AllergyIntolerance?clinical-status=[clinical status]	clinical status - <a href="http://hl7.org/fhir/R4/valueset-allergyintolerance-clinical.html">http://hl7.org/fhir/R4/valueset-allergyintolerance-clinical.html</a>
patient	MAY	base]/AllergyIntolerance?patient=[patient id]	Patient id in JWT id token

## b. Immunization

Describes the event of a member being administered a vaccine or a record of an immunization as reported by a member, a clinician, or another party.

HL7 FHIR Interactions:

### read Interaction:

GET [base]/Immunization/[id]

### search-type Interaction:

GET [base]/Immunization?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/Immunization	Bundle all Immunization resources for member in JWT id token
_id	MAY	[base]/Immunization?_id=[id]	

identifier – member number	MAY	[base]/Immunization?identifier=[member number]	member number - Internal member number
status	MAY	[base]/Immunization?status=[status]	status - <a href="http://hl7.org/fhir/R4/valueset-immunization-status.html">http://hl7.org/fhir/R4/valueset-immunization-status.html</a>
date	MAY	[base]/Immunization?date=eq[Immunization.occurrence]	
patient	MAY	[base]/Immunization?patient=[patient id]	Patient id in JWT id token

**c. Observation**

Measurements and simple assertions made about a member including height, weight, BMI, blood pressure, smoking status, labs, and vital signs panels.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/Observation/[id]

**search-type Interaction:**

GET [base]/Observation?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/Observation	Bundle all Observation resources for member in JWT id token
_id	MAY	[base]/Observation?_id=[id]	
identifier – member number	MAY	[base]/Observation?identifier=[member number]	member number - Internal member number
status	MAY	[base]/Observation?status=[status]	status - <a href="http://hl7.org/fhir/R4/valueset-observation-status.html">http://hl7.org/fhir/R4/valueset-observation-status.html</a>

category	MAY	[base]/Observation?category=[Observation Category]	Observation Category - <a href="https://terminology.hl7.org/1.0.0//CodeSystem-observation-category.html">https://terminology.hl7.org/1.0.0//CodeSystem-observation-category.html</a>
code	MAY	[base]/Observation?code=[Observation Type]	Observation Type - <a href="http://hl7.org/fhir/R4/value-set-observation-codes.html">http://hl7.org/fhir/R4/value-set-observation-codes.html</a>

date	MAY	[base]/Observation?date=eq[Observation.effective]	
patient	MAY	[base]/Observation?patient=[patient id]	Patient id in JWT id token

#### d. Medication

This resource is used for the identification and definition of a medication using the RxNorm RxCUI and terminology.

HL7 FHIR Interactions:

##### read Interaction:

GET [base]/Medication/[id]

##### search-type Interaction:

GET [base]/Medication?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/Medication	Bundle all Medication resources for member in JWT id token
_id	MAY	[base]/Medication?_id=[id]	
code	MAY	[base]/Medication?code=[RxCUI]	RxCUI - <a href="https://www.hl7.org/fhir/us/core/ValueSet-us-core-medication-codes.html">https://www.hl7.org/fhir/us/core/ValueSet-us-core-medication-codes.html</a> (rxnorm id)

**e. MedicationRequest**

An order or request for both supply of the medication and the instructions for administration of the medication to a member

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/MedicationRequest/{id}

**search-type Interaction:**

GET [base]/MedicationRequest?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/MedicationRequest	Bundle all MedicationRequest resources for member in JWT id token
_id	MAY	[base]/MedicationRequest?_id={id}	
identifier – member number	MAY	[base]/MedicationRequest?identifier={member number}	member number - Internal member number
status	MAY	[base]/MedicationRequest?status={status}	status - <a href="http://hl7.org/fhir/R4/va/lueset-medicationrequest-status.html">http://hl7.org/fhir/R4/va/lueset-medicationrequest-status.html</a>
intent	MAY	[base]/MedicationRequest?intent={MedicationRequest.intent}	intent - <a href="http://hl7.org/fhir/R4/va/lueset-medicationrequest-intent.html">http://hl7.org/fhir/R4/va/lueset-medicationrequest-intent.html</a>
authoredon	MAY	[base]/MedicationRequest?authoredon={eq[MedicationRequest.authoredon]}	
patient	MAY	[base]/MedicationRequest?patient={patient id}	Patient id in JWT id token

**f. Procedure**

An action that is or was performed on or for a member using the HCPCS, CPT, or other code sets

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/Procedure/[id]

**search-type Interaction:**

GET [base]/Procedure?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/Procedure	Bundle all Procedure resources for member in JWT id token
_id	MAY	[base]/Procedure?_id=[id]	
identifier – member number	MAY	[base]/Procedure?identifier=[member number]	member number - Internal member number
status	MAY	[base]/Procedure?status=[status]	status - <a href="http://hl7.org/fhir/R4/valueset-event-status.html">http://hl7.org/fhir/R4/valueset-event-status.html</a>
date	MAY	[base]/Procedure?date=[Procedure.performed date]	
code	MAY	[base]/Procedure?code=[Procedure.code]	Procedure.code - <a href="https://www.hl7.org/fhir/us/core/ValueSet-us-core-procedure-code.html">https://www.hl7.org/fhir/us/core/ValueSet-us-core-procedure-code.html</a> , <a href="http://www.ama-assn.org/go/cpt">http://www.ama-assn.org/go/cpt</a> , <a href="http://www.cms.gov/Medicare/Coding/ICD10">http://www.cms.gov/Medicare/Coding/ICD10</a>
patient	MAY	[base]/Procedure?patient=[patient id]	Patient id in JWT id token

**g. Goal**

Describes the intended behavioral health objective(s) for a member.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/Goal/[id]

**search-type Interaction:**

GET [base]/Goal?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/Goal	Bundle all Goal resources for member in JWT id token
_id	MAY	[base]/Goal?_id=[id]	
identifier – member number	MAY	[base]/Goal?identifier=[member number]	member number - Internal member number
lifecyclestatus	MAY	[base]/Goal?lifecycleStatus=[goal status]	goal status values - <a href="http://hl7.org/fhir/R4/valueset-goal-status.html">http://hl7.org/fhir/R4/valueset-goal-status.html</a>
target-date	MAY	[base]/Goal?target-date=eq[Goal.target.due]	
patient	MAY	[base]/Goal?_patient=[patient id]	Patient id in JWT id token

## 5. API(s) – PDEX US DRUG FORMULARY DIRECTORY IG

### Overview

Plan Drug Formulary API will support query requests using plan and drug identifiers and will return information on coverage including cost share and utilization management requirements of the formulary drugs tied to a plan. The formulary information returned is based on the current information for the patient's formulary list and benefit plan limits and rules. Previous and future formulary lists are not supported. This implementation guide contains the specifications for the FHIR resources List and MedicationKnowledge profiled from the HL7 FHIR® DaVinci PDex US Drug Formulary Implementation Guide (<https://build.fhir.org/ig/HL7/davinci-pdex-formulary>).

### Resource Descriptions

#### a. List

The List API (using the CoveragePlan profile) will retrieve the active benefit plans and their cost share tiering data for the query parameters in the API request. The CoveragePlan resource represents a health plan and contains links to administrative information, a list of formulary drugs covered under that plan, and a definition of drug tiers and their associated cost-sharing models.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/List/[id]

**search-type Interaction:**

GET [base]/List?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/List	Bundle all List resources
identifier - plan identifier	MAY	[base]/List?identifier=[plan identifier]	plan identifier-internal rxplan identifier from FHIR Coverage Resource

**b. MedicationKnowledge**

The MedicationKnowledge API (using the FormularyDrug Davinci profile) will retrieve active formulary drug records for the query parameters in the API request. The FormularyDrug resource represents a drug that is part of a drug formulary. A drug formulary is a list of brand-name and generic prescription drugs a health insurer agrees to pay for, at least partially, as part of health insurance coverage. In addition to identifying the drug by its RxNorm code and the PlanID of the formulary, the FormularyDrug entry provides information on prescribing limitations, and optionally drug classification.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/MedicationKnowledge/[id]

**search-type Interaction:**

GET [base]/MedicationKnowledge?[parameter=value]

Parameter	Conformance	Sample Search	Notes
DrugPlan	MUST	[base]/MedicationKnowledge?DrugPlan=[plan identifier]	plan identifier-internal rxplan identifier from FHIR Coverage Resource

code	MAY	[base]/MedicationKnowledge?DrugPlan=[plan identifier]&code=[RxCUI]	RxCUI - <a href="http://hl7.org/fhir/us/core/STU3.1.1/ValueSet-us-core-medication-codes.html">http://hl7.org/fhir/us/core/STU3.1.1/ValueSet-us-core-medication-codes.html</a> (rxnorm id)
DrugTier	MAY	[base]/MedicationKnowledge?DrugPlan=[plan identifier]&DrugTier=[Drug tier]	Drug tier - <a href="https://fhir.primetherapeutics.com/data/CodeSystem/drugTierID">https://fhir.primetherapeutics.com/data/CodeSystem/drugTierID</a>
DrugName	MAY	[base]/MedicationKnowledge?DrugPlan=[plan identifier]&DrugName:contains=[Drug name]	Drug name - Descriptive name of a formulary drug

## 6. API(s) – PDEX PROVIDER DIRECTORY IG

### Overview

The HL7 FHIR® DaVinci PDEX Plan Net Implementation Guide enables third party applications to call FHIR APIs for returning payer Medicare Advantage provider networks. This implementation guide contains the specifications for the FHIR InsurancePlan, Location, HealthCareService, Organization, OrganizationAffiliation, Practitioner, and PractitionerRole resources profiled from the HL7 FHIR® DaVinci PDEX Plan Net Implementation Guide (<https://build.fhir.org/ig/HL7/davinci-pdex-plan-net>).

### Resource Descriptions

#### a. InsurancePlan

Details of a Health Insurance product/plan provided by an organization.

HL7 FHIR Interactions:

#### read Interaction:

GET [base]/InsurancePlan/[id]

#### search-type Interaction:

GET [base]/InsurancePlan?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/InsurancePlan	Bundle all Insurance resources



_id	MAY	[base]/InsurancePlan?_id=[id]	
identifier - rxplan	MAY	[base]/InsurancePlan?identifier=[rxplan]	rxplan - rxplan value from FHIR Coverage.class structure
identifier - product_code	MAY	[base]/InsurancePlan?identifier=[product_code]	product_code - product_code value from FHIR Coverage.class structure
name	MAY	[base]/InsurancePlan?name=[name of benefit plan]	

### b. Location

The physical place where healthcare services are provided, practitioners are employed, organizations are based, etc.

HL7 FHIR Interactions:

#### read Interaction:

GET [base]/Location/[id]

#### search-type Interaction:

GET [base]/Location?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/Location	Bundle all Location resources
_id	MAY	[base]/Location?_id=[id]	
address-postalcode	MAY	[base]/Location?address-postalcode=[zip code]	
address-state	MAY	[base]/Location?address-state=[state]	state - two byte state code
address-city	MAY	[base]/Location?address-city=[city]	
address	MAY	[base]/Location?address=[part of the address]	

type	MAY	[base]/Location?type=[type of location]	type - <a href="http://terminology.hl7.org/CodeSystem/v3-RoleCode">http://terminology.hl7.org/CodeSystem/v3-RoleCode</a>
------	-----	---	--

**c. HealthCareService**

Services offered by an organization/practitioner at a location,

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/HealthCareService/[id]

**search-type Interaction:**

GET [base]/HealthCareService?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/HealthCareService	Bundle all HealthCareService resources
_id	MAY	[base]/HealthCareService?_id=[id]	
coverage-area	MAY	[base]/HealthCareService?coverage-area=[coverage area location]	
location	MAY	[base]/HealthCareService?location=[location of service]	
organization	MAY	[base]/HealthCareService?organization=[Organization that provides healthcare service]	
specialty	MAY	[base]/HealthCareService?specialty=[specialty]	specialty - <a href="http://nucc.org/provider-taxonomy">http://nucc.org/provider-taxonomy</a>
name	MAY	[base]/HealthCareService?name=[Healthcare service name]	
service-category	MAY	[base]/HealthCareService?service-category=[Service category]	Service category - <a href="http://hl7.org/fhir/us/davinci-pdex-plan-net/CodeSystem/HealthcareServiceCategoryCS">http://hl7.org/fhir/us/davinci-pdex-plan-net/CodeSystem/HealthcareServiceCategoryCS</a>
service-type		[base]/HealthCareService?service-type=[Service type]	Service type - <a href="http://terminology.hl7.org/CodeSystem/service-type">http://terminology.hl7.org/CodeSystem/service-type</a>

**d. Organization**

Organizations and individuals that deliver a set of services across a geography through health insurance products/plans.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/Organization/[id]

**search-type Interaction:**

GET [base]/Organization?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/Organization	Bundle all Organization resources
_id	MAY	[base]/Organization?_id=[id]	
identifier	MAY	[base]/Organization?identifier=[NPI]	
address	MAY	[base]/Organization?address=[part of the address]	
name	MAY	[base]/Organization?name=[Organization name]	
type	MAY	[base]/Organization?type=[Type of organization]	Type of organization - <a href="http://hl7.org/fhir/us/davinci-pdex-plan-net/CodeSystem/OrgTypeCS">http://hl7.org/fhir/us/davinci-pdex-plan-net/CodeSystem/OrgTypeCS</a>

**e. OrganizationAffiliation**

Affiliation/association/relationship between two distinct organizations, that is not a part-of relationship/sub-division relationship.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/OrganizationAffiliation/[id]

**search-type Interaction:**

GET [base]/OrganizationAffiliation?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/OrganizationAffiliation	Bundle all OrganizationAffiliation resources
_id	MAY	[base]/OrganizationAffiliation?_id=[id]	
identifier	MAY	[base]/OrganizationAffiliation?identifier=[NPI]	
location	MAY	[base]/OrganizationAffiliation?location=[location(s) at which the role occurs]	

network	MAY	[base]/OrganizationAffiliation?network=[Provider network]	Provider network - Networks are stored in the FHIR InsurancePlan resources
participating-organization	MAY	[base]/OrganizationAffiliation?participating-organization=[organization that provides services to the primary organization]	
primary-organization	MAY	[base]/OrganizationAffiliation?primary-organization=[organization that receives the services from the participating organization]	
role	MAY	[base]/OrganizationAffiliation?role=[Role of participating-organization]	Role - <a href="http://hl7.org/fhir/us/davinci-pdex-plan-net/CodeSystem/OrganizationAffiliationRoleCS">http://hl7.org/fhir/us/davinci-pdex-plan-net/CodeSystem/OrganizationAffiliationRoleCS</a>
service	MAY	[base]/OrganizationAffiliation?service=[Specialty of the participatingOrganization]	Specialty - <a href="http://nucc.org/provider-taxonomy">http://nucc.org/provider-taxonomy</a>

**f. Practitioner**

A person who is directly or indirectly involved in the provisioning of healthcare.

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/Practitioner/[id]

**search-type Interaction:**

GET [base]/Practitioner?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/Practitioner	Bundle all Practitioner resources
_id	MAY	[base]/Practitioner?_id=[id]	
identifier	MAY	[base]/Practitioner?identifier=[NPI]	
family	MAY	[base]/Practitioner?family=[Portion of the family name]	
name	MAY	[base]/Practitioner?name=[Any of the string fields in the HumanName]	

**g. PractitionerRole**

Describes the role a practitioner plays at an organization

HL7 FHIR Interactions:

**read Interaction:**

GET [base]/PractitionerRole/[id]

**search-type Interaction:**

GET [base]/PractitionerRole?[parameter=value]

Parameter	Conformance	Sample Search	Notes
	MAY	[base]/PractitionerRole	Bundle all PractitionerRole resources
_id	MAY	[base]/PractitionerRole?_id=[id]	
identifier	MAY	[base]/PractitionerRole?identifier=[NPI]	
location	MAY	[base]/PractitionerRole?location=[locations at which this practitioner provides care]	
practitioner	MAY	[base]/PractitionerRole?practitioner=[Practitioner providing the services]	
role	MAY	[base]/PractitionerRole?role=[Practitioner's role]	Practitioner roles - <a href="http://hl7.org/fhir/us/davinci-pdex-plan-net/STU1/CodeSystem-ProviderRoleCS.html">http://hl7.org/fhir/us/davinci-pdex-plan-net/STU1/CodeSystem-ProviderRoleCS.html</a>
service	MAY	[base]/PractitionerRole?service=[HealthCareService reference]	
specialty	MAY	[base]/PractitionerRole?specialty=[Practitioner specialty]	Practitioner specialties - <a href="http://nucc.org/provider-taxonomy">http://nucc.org/provider-taxonomy</a>