Getting Started

Welcome to the Blue Cross Blue Shield of Alabama Developer Portal! The portal provides access to BCBSAL's APIs, which are based on the **Health Level 7® (HL7) Fast Healthcare Interoperability Resources (FHIR®) standards**.

BCBSAL interoperability APIs enable BCBSAL 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. These APIs provide the following capabilities:

- 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 and the **OAuth 2.0 Connect** standard for member authorization
- Use the **HL7 FHIR** standard for sharing public non-member specific data

There are Several BCBSAL APIs, giving you the ability to build applications for BCBSAL members and providers based on the following:

- The Patient Access API allows BCBSAL members to access their claims and encounter information (including cost), as well as a defined sub-set of their clinical information.
- The Real-Time Pharmacy Benefit API does a check on the drug benefits that a member has available.
- The Public Provider Directory API facilitates searches for BCBSAL providers, as well as allowing providers to search for other in-network providers.
- The Formulary API provides access to the BCBSAL drug formularies.
- The Provider Access API allows providers to access the claims and clinical information of the members who have a treatment relationship.
- The Payer to Payer API provides a method for members to receive continuity of care by transferring their insurance data from a previous payer to a new payer, or by allowing concurrent payers to exchange data.
- The Electronic Prior Authorization API does a benefit check to determine if a service needs prior authorization and if so, determine if it can be automated or if more information is required to make an approval or denial decision.

You'll find several resources on the portal under the “Docs” link (https://portal.safhir.io/portal/documentation) to help you with registering and testing your applications. These include a developer guide to help you get your

developer account registered, and your application authorized; an API Documentation guide to connect you to the capability statements and Swagger documentation; and Implementation Guides, which provide information on the how the FHIR spec is implemented.

Quick Start Guide

Follow these steps to register your developer account and get your application authorized, so you can begin building your application.

1. To begin, connect to https://portal.safhir.io.
    a. If you already have a third-party developer account set up here, you can click on “Login” and enter your current credentials.
    b. If this is a new registration, then you have several options:
        1) If you are registering for the FHIR Patient Access API, then select “Register as Developer” and complete the information requested to receive access to the portal.
        2) If you are registering for the FHIR Provider Access API, then select “Register as Provider” and complete the information requested to receive access to the portal.
        3) If you are registering for the FHIR Payer-to-Payer API, then select “Register as Payer” and complete the information requested to receive access to the portal.
        4) If you are registering for the FHIR Electronic Prior Authorization API, then either select “Register as Provider” or “Register as UM Vendor” and complete the information requested to receive access to the portal.
2. After logging into the portal, select “Create New Application”. This is where you will provide the details for your application so you can receive your Client ID and Client Secret. In the application registration form, you will be asked to provide the name of your application, the redirect URI, and the Implementation Guides to which you want access. You will also need to enter the URI to both your privacy policy and security policy.
3. Once your application is approved, you will receive an email response verifying that you are approved. Log back into the portal and go to the “Approved” applications. Click on the dropdown for the application you created, and then click on “Application Credentials” to receive your application's *Client ID* and *Client Secret* information, along with the URLs you need for connection. You will

need these (along with the redirect URI and scope) to use during authentication.
4. Start using the BCBSAL APIs with your newly registered application.

How to Connect

Follow these steps to use your application's Client ID, Client Secret, and tokens to securely connect your application to your specifically requested API.

FHIR Patient Access API Authorization Overview

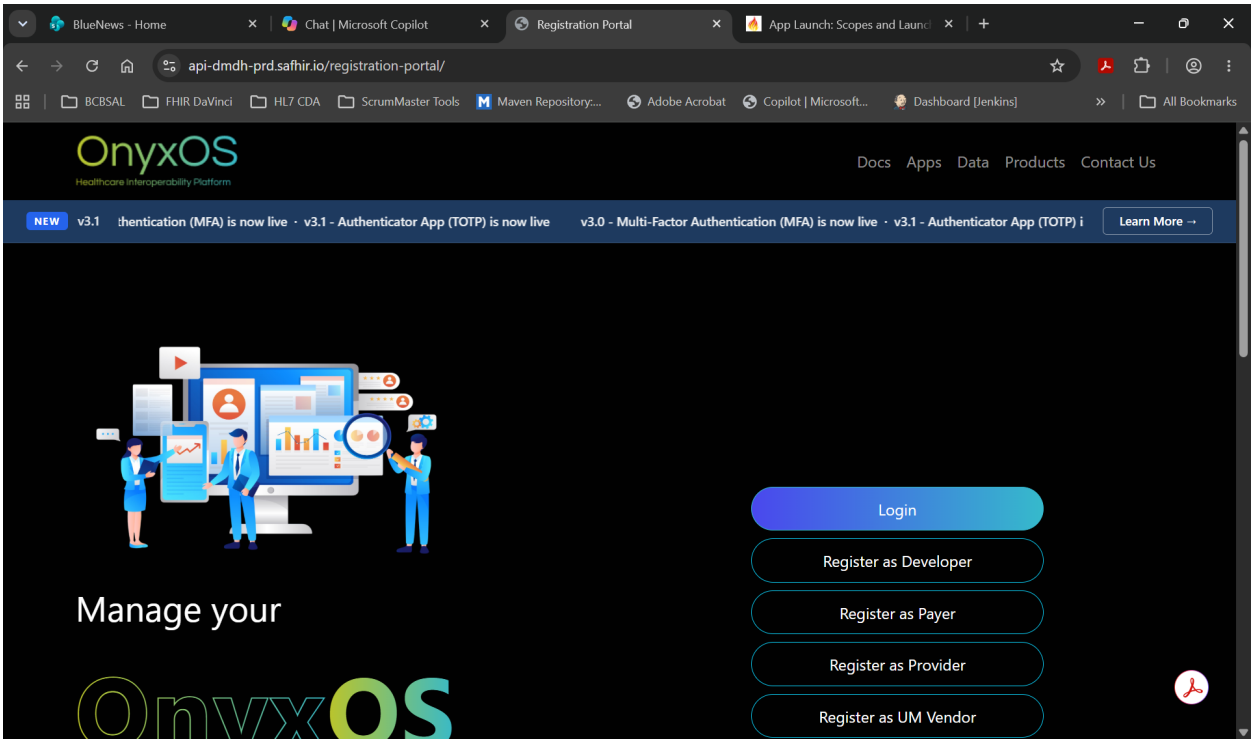
The Patient Access API is based on the **FHIR SMART app framework**, and relies on the **OAuth 2.0 specification** for securing connections.

Note:

- If your application is using the Patient Access portion of the BCBSAL APIs, you will need to utilize member authentication protocols to connect to the BCBSAL FHIR server.
- If your application only uses the Public Provider Directory API, you don't need to implement the member authentication protocols.

Application Registration

To begin, you must register by going to https://portal.safhir.io.



If you have not registered before, you will need to select “Register as Developer” in order to connect to the FHIR Patient Access API. Fill in the information provided and click on “Continue”. This will give you access to the portal to register your application.

Once access is granted, you can create a new application by logging in to the portal and selecting “Create New Application”. When you register your application, you will need to have a callback URL (aka redirect URI) to assign to your application, which will be used during the authorization flow. Fill in all required information to receive your client ID and client secret.

In addition, you need to select the Implementation Guides you wish to use, which is used to define the authorization components of the BCBSAL member that will be using your application. The BCBSAL API has implemented the **SMART App Launch: Scopes and Launch Context** to manage access to a BCBSAL member's data.

Currently, the following scopes are available and enabled by default:

Scope	Grants
`patient/*.read`	This scope permits your application to access the supported resources for the BCBSAL member that has logged into your application.
patient/AllergyIntolerance.read	Read access to AllergyIntolerance
patient/Condition.read	Read access to Condition
patient/Coverage.read	Read access to Coverage
patient/Encounter.read	Read access to Encounters data
patient/ExplanationOfBenefit.read	Read access to Explanation Of Benefit for all but Pharmacy
patient/Immunization.read	Read access to Immunization resources
patient/Medication.read	Read access to Medication
patient/MedicationRequest.read	Read access to MedicationRequest resources
patient/Observation.read	Read access to Observation
patient/Patient.read	Read access to Patient resource
patient/Procedure.read	Read access to Procedure resource
patient/ImmunizationRecommendation.read	Read access to ImmunizationRecommendation
patient/ServiceRequest.read	Read access to ServiceRequest
patient/MedicationStatement.read	Read access to MedicationStatement
patient/MedicationDispense.read	Read access to MedicationDispense
user/Location.read	Read access to Location

Scope	Grants
user/Practitioner.read	Read access to Practitioner
user/Organization.read	Read access to Organization
user/HealthcareService.read	Read access to HealthcareService
user/PractitionerRole.read	Read access to PractitionerRole
user/InsurancePlan.read	Read access to InsurancePlan
user/OrganizationAffiliation.read	Read access to OrganizationAffiliation
user/MedicationKnowledge.read	Read access to MedicationKnowledge

After registering your application, you will be assigned a Client ID and Client Secret. The Client Secret should only be used if it can be kept confidential, such as communication between your server and the BCBSAL API.

You will use the Client ID and Client Secret that you received after registering your application in an exchange with the Identity Server to receive your JSON Web Token (JWT).

Standard Authorization Code Flow

In the standard authorization code flow, to connect to the FHIR Patient Access API, you will need to use the OAuth 2.0 flow for authentication. This flow should only be used by sites that can safely protect the Client ID and Client Secret, such as a site running on a secure server.

In this flow, after your application has been selected by a BCBSAL member, your application will send a request to the BCBSAL Identity Server to perform authentication. Then the BCBSAL Identity Server will redirect the BCBSAL member to a BCBSAL login screen. There, the BCBSAL user will login, and they will authorize the data that your application will be able to access on their behalf. In addition to authorizing the data, the member will also be prompted to complete a HIPAA Authorization Form online. This is required in order to proceed with access to the API.

Upon the BCBSAL member successfully logging in and providing authorization, the Identity Server will redirect the user back to your application at your registered redirect URI, and the authorization code will be included in the query parameters. The authorization code can then be exchanged for a JWT. The JWT should be included in FHIR requests as an authentication bearer token (within the request header). This token gives your application access to the FHIR server on behalf of the

BCBSAL member that logged in, allowing you to pass data back to the BCBSAL member.

Request authorization from user

To allow a user to authorize your application, direct them to BCBSAL's `/authorize` endpoint: https://api-bcbsal-prd.safhir.io/slapv3/o/carin-bb/authorize, which allows the user to securely login on behalf of your application.

The request must include the `response_type` set to `code`, your application's `client_id`, and your application's `redirect_uri`.

The following is an example of a web application's authorization request:

```
GET https://api-bcbsal-prd.safhir.io/slapv3/o/carin-bb/authorize?response_type=code&state=&client_id= 8981c3bd-9a8b-4503-a524-97c8105d37bf_2021-06-14_17-03-51&scope=&redirect_uri=https://your.redirectURL.com
```

Authorize Components

```
GET https://{{domain}}/oauth/authorize?response_type={{response_type}}&state={{stateRandom}}&client_id={{client_id}}&scope={{scope}}
```

- URL protocol: https
- Domain: The domain of the BCBSAL API site.
- Response_Type: `code`
- **State**: A random number that your application generates. (Optional)
- Client ID: The Client ID that you received when you registered your application.
- Scope: `patient/*.read`
  Note: the member will be given the opportunity to disable some scopes if they desire so you may not always get all patient resources.

Exchange Code for Token

After your application sends the authorization request, the BCBSAL customer will be directed to a BCBSAL sign in page through browser re-directs, where they will provide their BCBSAL credentials to authenticate themselves. Upon completing sign-in, the BCBSAL member will be presented with an authorization page. Once the member authorizes your application, your application can now exchange the code provided in the redirected request for a full token to make calls to the BCBSAL FHIR server, using a POST operation.

Patient Access Overview

The Patient Access API is used to build applications that enable BCBSAL members to easily access their claims and encounter information (including cost), as well as a defined sub-set of their clinical information. This is a RESTful API that conforms to the FHIR standard and provides access to a BCBSAL member's data.

This section describes the FHIR profiles, resources and RESTful capabilities that the Patient Access API supports. A **profile** is a set of rules which allows a resource to be constrained, or to include extensions, so the resource can add additional attributes. The RESTful capabilities are discussed in further detail below.

Note:

- The descriptions and list of supported resources in this Implementation Guide were based on mandated versions of select HL7® FHIR® Implementation Guides (CARIN Consumer Directed Payer Data Exchange, DaVinci Payer Coverage Decision Exchange, and DaVinci Payer Data Exchange US Drug Formulary). These are subject to change.

Conformance Language

This specification uses the conformance verbs **SHALL**, **SHOULD** and **MAY**:

- SHALL: An absolute requirement for all implementations. The FHIR server must return this data.
- SHOULD: A best practice or recommendation for the implementation. The FHIR server is recommended to return this data.
- MAY: An optional inclusion for the implementation; not a requirement. The FHIR server may return the data, but there is no requirement to do so.

Security

BCBSAL API requests often make use of patient-specific information which could be exploited by malicious actors resulting in exposure of patient data. For this reason, all BCBSAL Patient Access/patient transactions must be secured appropriately, and directed by regulations, with access limited to authorized individuals, data protected in transit, and appropriate audit measures taken.

Developers of third-party applications SHOULD be aware of these **security considerations** associated with FHIR transactions, particularly those related to:

- **Communications**
- **Authentication**

- **Authorization/Access Control**
- **Audit Logging**
- **Digital Signatures**
- **Security Labels**
- **Narrative**

The purpose of BCBSAL's Implementation Guide, security conformance requirements are as follows:

- Systems SHALL establish a risk analysis and management regime that conforms to the HIPAA security regulatory requirements. In addition, US Federal systems SHOULD conform to the risk management and mitigation requirements defined in NIST 800 series documents. This SHOULD include security category assignment in accordance with NIST 800-60 vol. 2 Appendix D.14. The coordination of risk management and the related security and privacy controls - policies, administrative practices, and technical controls - SHOULD be defined in the Business Associate Agreement when available.
- Systems SHALL reference a single time source to establish a common time base for security auditing, as well as clinical records, among computing systems. The selected time SHOULD be documented in the Business Associate Agreement.
- Systems SHALL keep audit logs of the various transactions.
- Systems SHALL use TLS version 1.2 or higher for transmissions not taking place over a secure network connection. (Using TLS even within a secured network environment is still encouraged to provide defense depth.) US Federal systems SHOULD conform to FIPS PUB 140-2.
- Systems SHALL conform to **FHIR Communications Security** requirements.
- For Authentication and Authorization, Systems SHALL support the **SMART App Launch Framework** for client <-> server interactions.

  > **Note**: The SMART on FHIR specifications include the required OAuth 2.0 scopes for enabling security decisions.

- Systems SHALL implement consent requirements per their state, local, and institutional policies. The Business Associate Agreements SHOULD document systems mutual consent requirements.

Authorization, Authentication, and Registration

Client applications and systems of record SHALL support the standalone launch sequence of the **SMART App Launch framework** for user authorization and client

authentication. Systems of record SHALL publish their authorization and token endpoints for discovery in accordance with the SMART App Launch framework.

FHIR RESTful API Capabilities

- Implements RESTful behaviors according to the FHIR specification.
- Returns the following http status codes:

HTTP Status Code	Description
`200`	Successful Request
`400`	Invalid Parameter
`401`	Not Authorized
`403`	Insufficient Scope
`404`	Unknown Resource
`410`	Deleted Resource
`500`	System Error

- Supports JSON source formats for all US Core interactions.

Note: For more information about the FHIR RESTful API, please refer to the **HL7® FHIR® RESTful API** topics.

RESTful Capability by Resource, with Alignment to Profiles

Read (Fetch) Syntax

To fetch resource interactions, use the following syntax:

```
GET [base]/[Resource-type]/[id] {parameters}
```

- `GET`: the HTTP verb used to fetch the resource
- Content surrounded by " " are mandatory for the client to supply, and will be replaced by the string literal identified.
  - `base`: The Service Root URL
  - `Resource-type`: The name of the resource type (e.g "Patient")
  - `id`: The logical ID for a resource (e.g. "24342")
- Content surrounded by "{ }" is optional for the client to supply, and will be replaced by the string literal identified.
  - `parameters`: optional - definition for the particular interaction

Search Syntax

To search resource interactions, use the following syntax:

```
GET [base]/[Resource-
type]?[parameter1]{:m1|m2|...}={c1|c2|...}[value1{,value2,...}]{&[parameter2]{:m1
|m2|...}={c1|c2|...}[value1{,value2,...}]&....}
```

- `GET`: the HTTP verb used to fetch the resource
- Variables surrounded by " " are mandatory for the client to supply, and will be replaced by the string literal identified.
- Variables surrounded by "{ }" are optional for the client to supply, and will be replaced by the string literal identified.
    - `base`: The Service Root URL
    - `Resource-type`: The name of a resource type (e.g. "Patient")
    - `parameter`: The search parameters as defined for the particular interaction (e.g. "?patient=Patient/123")
    - `value`: the search parameter value for a particular search

        > **Note**: For values of type Token, the syntax `{system|}[code]` means that the system value is optional for the client to supply.

    - `{:m1|m2|...}`: The list of supported search parameter modifiers
    - `{c1|c2|...}`: The list of supported search parameter comparators
    - `{,value2,...}`: Optional multiple "OR" values
    - `{&parameter2={:m1 m2 ...}={c1 c2 ...}[value1{,value2,...}&...}`: Optional multiple "AND" search parameters

In the simplest case, a search is executed by performing a GET operation in the RESTful framework:

```
GET [base]/[Resource-type]?name=value&...
```

For this RESTful search, the parameters are a series of `name=[value]` pairs encoded in the URL. The search parameter names are defined for each resource. For example, the Observation resource the name "code" for search on the LOINC code.

Note: For searches where the client does not supply a status parameter, the implementation's business rules may override the FHIR RESTful search expectations and require a status parameter to be provided. These systems are allowed to reject such requests as follows:

- SHALL return an http 400 status.
- SHALL return an **OperationOutcome** specifying that status(es) must be present.

- SHALL support search with status if status is required.
- SHALL NOT restrict search results (i.e. apply 'hidden' filters) when a client includes status parameters in the query.
    - If a system doesn't support a specific status code value that is queried, search results SHOULD return an http 200 status with a search bundle containing resources matching the search criteria and an OperationOutcome warning the client which status code value is not supported.
    - For example, in a query enumerating all the `AllergyIntolerance.verificationStatus` statuses to a system that supports concepts `unconfirmed`, `confirmed`, `entered-in-error but not refuted`, the search parameter is referring to an unsupported code since `refuted` is not known to the server.

For more information about how the search resource interactions are handled, refer to the **HL7® FHIR® Search** topic.

Patient Access Resources

These are the endpoints and resources available with the FHIR Patient Access API. The Patient Access API supports the following FHIR approved implementation guides, and supports the following profiles:

Implementation Guides

- **US Core Implementation Guide**
- **CARIN Consumer Directed Payer Data Exchange Implementation Guide**
- **DaVinci Payer Coverage Decision Exchange Implementation Guide**
- **DaVinci Payer Data Exchange US Drug Formulary Implementation Guide**

Supported Profiles

- **US Core Profiles**
- **CARIN BB Profiles**
- **DaVinci PDEX CoveragePlan Profile**
- **DaVinci PDEX FormularyDrug Profile**

Base URLs

The base URL for each endpoint can be found on the website: `https://api-bcbsal-prd.safhir.io/v1/api/`

Open API Specifications

To assist the developer in understanding the server interactions, the following Swagger files are available:

CARIN BB: https://api-bcbsal-prd.safhir.io/v1/api/carin-bb/openapi.json

PDEX: https://api-bcbsal-prd.safhir.io/v1/api/pdex/openapi.json

Plan-Net: https://api-bcbsal-prd.safhir.io/v1/api/provider-directory/openapi.json

Formulary: https://api-bcbsal-prd.safhir.io/v1/api/formulary-net/openapi.json

Secure Formulary: https://api-bcbsal-prd.safhir.io/v1/api/secure-formulary/openapi.json

AllergyIntolerance

A record of a clinical assessment of an allergy or intolerance (generally, a risk of adverse reaction to a substance).

Substances include, but are not limited to the following: a therapeutic substance administered correctly at an appropriate dosage for the individual; food; material derived from plants or animals; or venom from insect stings.

The **US Core AllergyIntolerance Profile** is based upon the core **FHIR AllergyIntolerance Resource** and created to meet the 2015 Edition Common Clinical Data Set 'Medical allergies' requirements.

Condition

A clinical condition, problem, diagnosis, or other event, situation, issue, or clinical concept that has risen to a level of concern.

The **US Core Condition Profile** is based upon the core **FHIR Condition Resource** and created to meet the 2015 Edition Common Clinical Data Set 'Problems' and 'Health Concerns' requirements.

Coverage

The **Coverage resource** is intended to provide the high-level identifiers and descriptors of an insurance plan, typically the information which would appear on an insurance card, which may be used to pay, in part or in whole, for the provision of health care products and services.

Supports the **CARIN BB Coverage Profile**.

Encounter

An interaction between a patient and healthcare provider(s) for the purpose of providing healthcare service(s) or assessing the health status of a patient.

The **US Core Encounter Profile** is based on the core **FHIR Encounter resource**.

Explanation of Benefit

****For Pharmacy EOB's, please see the PharmcyExplanationOfBenefit section in this document.**

This resource provides: the claim details; adjudication details from the processing of a Claim; and optionally account balance information, for informing the subscriber of the benefits provided.

The ExplanationOfBenefit resources can represent a Patient, Provider, Insurer, Care Team, Facility and Coverage with references to Patient, Organization, Practitioner, PractitionerRole, Location and Coverage resources. The BCBSAL FHIR server is capable of returning all Patient, Practitioner, Organization, PractitionerRole, Location and Coverage resources for an ExplanationOfBenefit via the `_id` of the reference resource.

The BCBSAL FHIR server supports the `_include` parameter for search parameters defined on these elements. Your application must also support the `_include` parameter for search parameters defined on these elements.

Supports the **CARIN BB Explanation of Benefit Profile**.

Immunization

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

The **US Core Immunization Profile** is based upon the core **FHIR Immunization resource** and created to meet the 2015 Edition Common Clinical Data Set 'Immunizations' requirements.

List

The **FHIR List resource** is a part of the **CoveragePlan profile**, which 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.

This resource supports the **PDEX Formulary Profile**.

Extensions

- DrugTierDefinition
- EmailPlanContact
- FormularyURL
- MarketingURL
- Network
- PlanIDType
- SummaryURL

Location

Details and position information for a physical place where services are provided and resources and participants may be stored, found, contained, or accommodated.

The **US Core Location Profile** is based upon the core **FHIR Location resource**.

Medication

This resource is primarily used for the identification and definition of medication for the purposes of prescribing, dispensing, and administering a medication as well as for making statements about medication use.

The **US Core Medication Profile** is based upon the core **FHIR Medication resource** and created to meet the 2015 Edition Common Clinical Data Set 'Medications' requirements.

MedicationKnowledge

The **MedicationKnowledge resource** is associated with the **FormularyDrug resource**, which 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 and alternatives.

Part of Formulary, Drug; supports the **PDEX Formulary Profile**.

Extensions

- DrugAlternatives
- PriorAuthorization
- StepTherapyLimit
- QuantityLimit
- PlanID
- DrugTierID

MedicationRequest

Records a patient's medication prescription or order. The **US Core MedicationRequest Profile** is based upon the core **FHIR MedicationRequest resource** and created to meet the 2015 Edition Common Clinical Data Set 'Medications' requirements.

The MedicationRequest resources can represent a medication using either a code or refer to the Medication resource. When referencing Medication, the resource may be contained or an external resource. The BCBSAL FHIR server application MAY choose any one way or more than one method, but if an external reference to Medication is used, the server SHALL support the `_include` parameter for searching this element. Your application must support all methods.

Observation

Used for simple observations such as device measurements, laboratory atomic results, vital signs, height, weight, smoking status, comments, etc. Other resources are used to provide context for observations such as laboratory reports, etc.

Supports the **US Core Smoking Status Observation Profile**, **US Core Pediatric Weight for Height Observation Profile**, **US Core Laboratory Result Observation Profile**, **US Core Pediatric BMI for Age Observation Profile**, **US Core Pediatric Head Occipital-frontal Circumference Percentile Profile**, and **US Core Pulse Oximetry Profile**.

Organization

A formally or informally recognized grouping of people or organizations formed for the purpose of achieving some form of collective action. Includes companies, institutions, corporations, departments, community groups, healthcare practice groups, payer/insurer, etc.

The **US Core Organization Profile** is based on the core **FHIR Organization resource**. This resource is also based on the **CARIN BB Organization Profile**.

Patient

Information about an individual receiving health care services. The **US Core Patient Profile** is based upon the core **FHIR Patient resource** and designed to meet the applicable patient demographic data elements from the 2015 Edition Common Clinical Data Set. This resource is also based on the **CARIN BB Patient Profile**.

Pharmacy Explanation of Benefit

This resource provides: the claim details; adjudication details from the processing of a Claim; and optionally account balance information, for informing the subscriber of the benefits provided.

The base URL for the Pharmacy EOB endpoint is:

`https://api-bcbsal-prd.safhir.io/v1/api/secure-formulary/`

The Pharmacy ExplanationOfBenefit resources will represent the EOBs for a particular Patient, with references to Patient, Organization, Practitioner, PractitionerRole, Location and Coverage resources. The BCBSAL FHIR pharmacy proxy server can return all Patient, Practitioner, Organization, PractitionerRole, Location and Coverage resources for an ExplanationOfBenefit via the `_id` of the reference resource.

The BCBSAL FHIR pharmacy proxy server is a proxy to a 3rd party server and retrieve by reference for referenced resources will not work via subsequent calls. As a result, the BCBSAL FHIR pharmacy proxy will automatically use the `_include` parameter for all referenced resources and those resources will be returned to your application. Your application is responsible for retrieving any information it needs from the referenced resources that are returned.

Practitioner

A person with a formal responsibility in the provisioning of healthcare or related services.

The **US Core Practitioner Profile** is based on the core **FHIR Practitioner resource**. This resource is also based on the **CARIN BB Practitioner Profile**.

PractitionerRole

Roles and/or organizations that the practitioner is associated with. The **US Core PractitionerRole Profile** is based on the core **FHIR PractitionerRole resource**.

The PractitionerRole resources can represent a Practitioner and Organization with a reference to a Practitioner or Organization resource. The BCBSAL FHIR server MAY support the `_include` parameter for search parameters defined on these elements. Your application must support the `_include` parameter for search parameters defined on these elements.

For example, the server MAY be capable of returning a Practitioner and Organization for a PractitionerRole using:

```
GET [base]/PractitionerRole?_id=[id]&_include=PractitionerRole:practitioner&
_include=PractitionerRole:organization
```

Procedure

An action that is being, or was, performed on a patient.

The **US Core Procedure Profile** is based upon the core **FHIR Procedure resource** and was created to meet the 2015 Edition Common Clinical Data Set 'Procedures' requirements.

Provenance

Provenance is provided by the payer to identify the source of the information, whether the data came via a clinical record or a claim record and whether the data was subject to manual transcription or other interpretive transformation. This Profile places the PayerSourceFormat as an extension to the base profile.

The **PDEX Provenance Profile** is based on the core **FHIR Provenance resource**.

FHIR Public Provider Directory

Overview

The FHIR Public Provider Directory API accesses the BCBSAL FHIR server portion of the Provider and Pharmacy Directories. Utilizing only read-only RESTful GET API calls (PUT and POST are not currently supported), you can create an application to access information about providers and pharmacies.

This section describes the FHIR profiles, resources and RESTful capabilities that the Public Provider Directory API supports. A **profile** is a set of rules which allows a resource to be constrained, or to include extensions, so the resource can add additional attributes. The RESTful capabilities are discussed in further detail below.

Note:

- The descriptions and list of supported resources in this Implementation Guide were based on a draft version of the HL7® FHIR® DaVinci PDEX Payer Network (Plan Net) Implementation Guide. These are subject to change.

Conformance Language

This specification uses the conformance verbs **SHALL**, **SHOULD** and **MAY**:

- SHALL: An absolute requirement for all implementations. The FHIR server must return this data.
- SHOULD: A best practice or recommendation for the implementation. The FHIR server is recommended to return this data.
- MAY: An optional inclusion for the implementation; not a requirement. The FHIR server may return the data, but there is no requirement to do so.

Security

BCBSAL's Public Provider Directory FHIR server does not maintain any records that can be associated with a consumer. Therefore, the FHIR Provider Directory API does not require third-party applications to send consumer identifying information.

FHIR RESTful API Capabilities

- Implements RESTful behaviors according to the FHIR specification.
- Returns the following http status codes:

HTTP Status Code	Description
`200`	Successful Request
`400`	Invalid Parameter
`401`	Not Authorized
`403`	Insufficient Scope
`404`	Unknown Resource
`410`	Deleted Resource
`500`	System Error

Note: For more information about the FHIR RESTful API, please refer to the **HL7® FHIR® RESTful API** topics.

RESTful Capability by Resource, with Alignment to Profiles

Read (Fetch) Syntax

To fetch resource interactions, use the following syntax:

```
GET [base]/[Resource-type]/[id] {parameters}
```

- `GET`: the HTTP verb used to fetch the resource
- Content surrounded by " " are mandatory for the client to supply, and will be replaced by the literal string identified.
  - `base`: The Service Root URL
  - `Resource-type`: The name of the resource type (e.g "Practitioner")
  - `id`: The logical ID for a resource (e.g. "12345")
- Content surrounded by "{ }" is optional for the client to supply, and will be replaced by the string literal identified.
  - `parameters`: optional - definition for the particular interaction

Search Syntax

To search resource interactions, use the following syntax:

```
GET [base]/[Resource-
type]?[parameter1]{:m1|m2|...}={c1|c2|...}[value1{,value2,...}]{&[parameter2]{:m1
|m2|...}={c1|c2|...}[value1{,value2,...}]&....}
```

- `GET`: the HTTP verb used to fetch the resource
- Variables surrounded by " " are mandatory for the client to supply and will be replaced by the string literal identified.
- Variables surrounded by "{ }" are optional for the client to supply and will be replaced by the string literal identified.

- `base`: The Service Root URL
- `Resource-type`: The name of a resource type (e.g "Practitioner")
- `parameter`: The search parameters as defined for the interaction (e.g. "?practitioner=Practitioner/12345")
- `value`: the search parameter value for a particular search

  > **Note**: For values of type Token, the syntax `{system|}[code]` means that the system value is optional for the client to supply.

- `{:m1|m2|...}`: The list of supported search parameter modifiers
- `{c1|c2|...}`: The list of supported search parameter comparators
- `{,value2,...}`: Optional multiple "OR" values
- `{&parameter2={:m1 m2 ...}={c1 c2 ...}[value1{,value2,...}&...}`: Optional multiple "AND" search parameters

In the simplest case, a search is executed by performing a `GET` operation in the RESTful framework:

```
GET [base]/[Resource-type]?name=value&...
```

For this RESTful search, the parameters are a series of `name=[value]` pairs encoded in the URL. The search parameter names are defined for each resource. For example, the Observation resource the name "code" for search on the LOINC code.

Note: For more information about how the search resource interactions are handled, refer to the **HL7® FHIR® Search** topic.

Public Provider Directory Resources

These are the resources and the endpoints available with the BCBSAL Public Provider Directory API. The Public Provider Directory API supports the following FHIR approved implementation guide, and supports the following profiles:

Implementation Guides

- **HL7® FHIR® DaVinci PDEX Payer Network (Plan Net) Implementation Guide**

Supported Profiles

- **HL7® FHIR® DaVinci PDEX Plan Net Profiles**

Base URL

The base URL for each provider directory endpoint is: **https://api-bcbsal-prd.safhir.io/v1/api/provider-directory/**

HealthcareService

The HealthCareService resource typically describes services offered by an organization/practitioner at a location. The resource may be used to encompass a variety of services covering the entire healthcare spectrum, including promotion, prevention, diagnostics, hospital and ambulatory care, home care, long-term care, and other health-related and community services.

The **DaVinci PDEX Plan-Net HealthcareService profile** is based on the core **FHIR HealthcareService resource**.

InsurancePlan

InsurancePlan describes a health insurance offering comprised of a list of covered benefits (i.e. the product), costs associated with those benefits (i.e. the plan), and additional information about the offering, such as who it is owned and administered by, a coverage area, contact information, etc.

The **DaVinci PDEX Plan-Net InsurancePlan profile** is based on the core **FHIR InsurancePlan resource**.

Location

A Location is the physical place where healthcare services are provided, practitioners are employed, organizations are based, etc. Locations can range in scope from a room in a building to a geographic region/area.

The **DaVinci PDEX Plan-Net Location profile** is based on the core **FHIR US Core Location resource**.

Organization

A Network refers to a healthcare provider insurance network. A healthcare provider insurance network is an aggregation of organizations and individuals that deliver a

set of services across a geography through health insurance products/plans. A network is typically owned by a payer.

An Organization refers to a formally or informally recognized grouping of people or organizations formed for the purpose of achieving some form of collective action. Includes companies, institutions, corporations, departments, community groups, healthcare practice groups, payer/insurer, etc.

The **DaVinci PDEX Plan-Net Network profile** is based on the core **FHIR Organization resource**, and the **DaVinci PDEX Plan-Net Organization profile** is based on the core **FHIR US Core Organization resource**.

OrganizationAffiliation

The OrganizationAffiliation resource describes relationships between two or more organizations, including the services one organization provides another, the location(s) where they provide services, the availability of those services, electronic endpoints, and other relevant information.

The **DaVinci PDEX Plan-Net OrganizationAffiliation profile** is based on the core **FHIR OrganizationAffiliation resource**.

Practitioner

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

The **DaVinci PDEX Plan-Net Practitioner profile** is based on the core **FHIR US Core Practitioner resource**.

PractitionerRole

A specific set of Roles/Locations/specialties/services that a practitioner may perform at an organization for a period of time.

The **DaVinci PDEX Plan-Net PractitionerRole profile** is based on the core **FHIR PractitionerRole resource**.

FHIR Provider Access API

The Provider Access API allows providers to query a payer's API for information about health plan members with whom they have a current or upcoming treatment relationship. Two versions are available: the attribution method and the attestation method.

The attribution method directly links each provider, organization, and member with a treatment relationship. It must maintain every connection, including relationships that span multiple provider groups or care teams.

The attestation method is intended for payers with very large provider and member populations, where maintaining thousands of attribution connections would be impractical. It allows a provider to attest to a treatment relationship and confirm authorization to access the member's records.

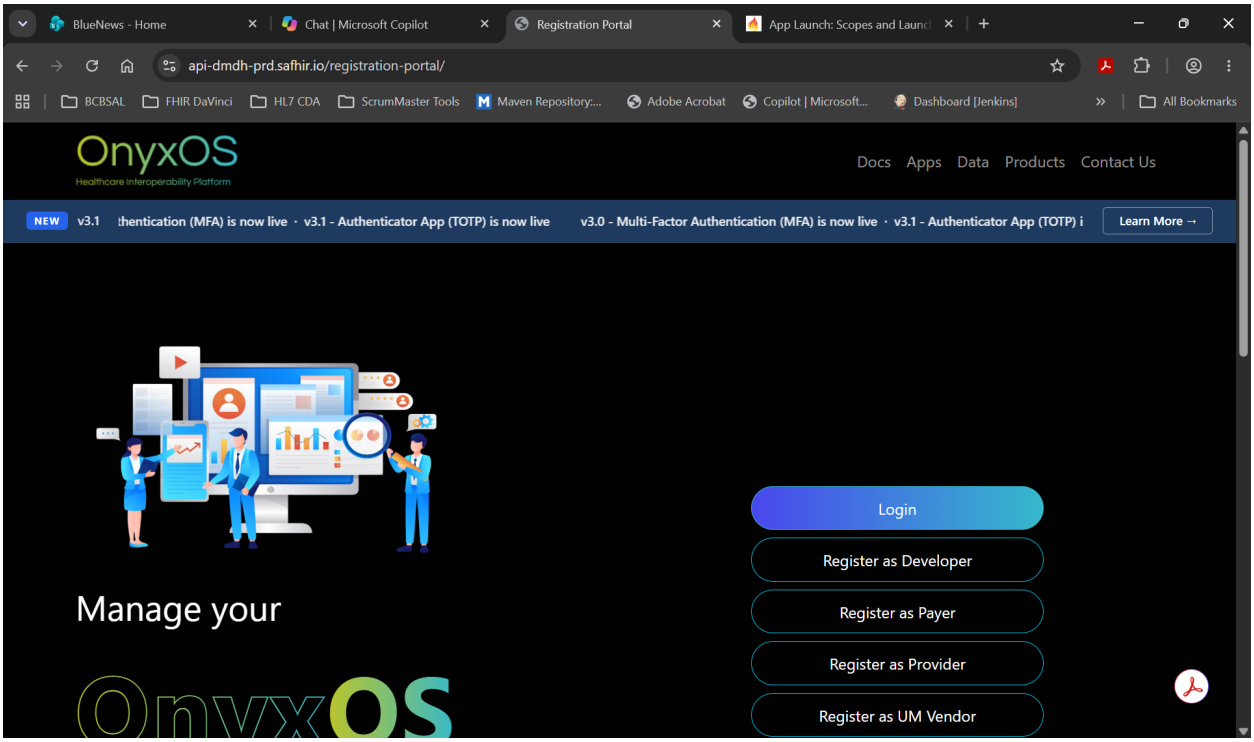
Data sharing through the FHIR Provider Access API is enabled by default; members must specifically request to opt out.

See the links below for more information about each method. The attestation method (v2) is expected to be used for the Provider Access API.

Provider Access API — Version 1

Provider Access API — Version 2

Application Registration for the FHIR Provider Access API
To begin, you must register by going to https://portal.safhir.io.



If you have not registered before, you will need to select “Register as Provider” to connect to the FHIR Provider Access API. Fill in the information provided and click on “Continue”. This will give you access to the portal to register your application.

Once access is granted, you can create a new application by logging in to the portal and selecting “Create an Application”. When you register your application, you will need to have a callback URL (aka redirect URI) to assign to your application, which will be used during the authorization flow. Fill in all the required fields and submit the application to receive your client ID and secret.

In addition, you need to select the Implementation Guides you wish to use, used to define the authorization components of the BCBSAL member that will be using your application. The BCBSAL API has implemented the **SMART App Launch: Scopes and Launch Context** to manage access to a BCBSAL member's data.

FHIR Payer-to-Payer API

The FHIR Payer-to-Payer API enables a member to transfer data between payers or share data with concurrent payers. By authorizing another payer to access data from previous or current payers, the member can maintain continuity of care when changing health plans.

After authorization is validated, a payer may request data for multiple members using bulk member matching or for one member at a time using single-member matching.

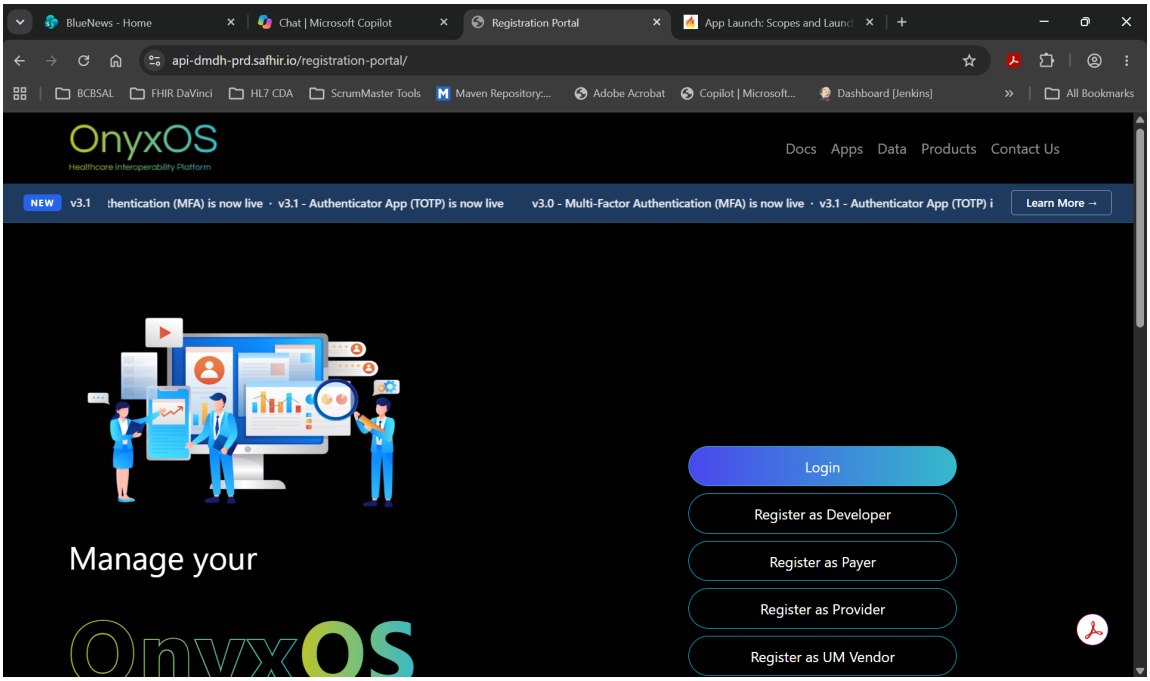
Data sharing through the FHIR Payer-to-Payer API requires a member to actively opt in before data can be transferred.

Implementation Guide:

Payer-to-Payer Exchange (Bulk)

Payer-to-Payer Exchange (Single Member)

Application Registration for the FHIR Payer-to-Payer API
To begin, you must register by going to https://portal.safhir.io.



If you have not registered before, you will need to select “Register as Payer” to connect to the FHIR Payer-to-Payer Access API. Fill in the information provided and click on “Continue”. This will give you access to the portal to register your application.

Once access is granted, you can create a new application by logging in to the portal and selecting “Create an Application”. When you register your application, you will need to have a callback URL (aka redirect URI) to assign to your application, which will be used during the authorization flow. Fill in all the required fields and submit the application to receive your client ID and secret.

In addition, you need to select the Implementation Guides you wish to use, used to define the authorization components of the BCBSAL member that will be using your application. The BCBSAL API has implemented the **SMART App Launch: Scopes and Launch Context** to manage access to a BCBSAL member's data.

FHIR Electronic Prior Authorization

The FHIR Electronic Prior Authorization API enables providers and utilization management vendors to exchange prior authorization information with BCBSAL electronically using standardized HL7 FHIR transactions.

The workflow helps determine whether an item or service requires prior authorization, identifies the documentation needed to support the request, submits the request, and returns the payer response or status to the provider. The electronic prior authorization workflow is supported by the HL7 Da Vinci Coverage Requirements Discovery (CRD), Documentation Templates and Rules (DTR), and Prior Authorization Support (PAS) implementation guides. CRD communicates coverage and prior authorization requirements during the provider workflow. DTR helps collect the clinical documentation and payer-specific information needed for review. PAS supports the electronic submission of prior authorization requests and the exchange of responses and status information.

Electronic prior authorization (ePA) is important because:

- It reduces reliance on manual phone, fax, and portal processes
- It allows providers to have earlier visibility into coverage and documentation requirements
- It improves the completeness and consistency of submitted information
- It supports faster, more transparent decisions

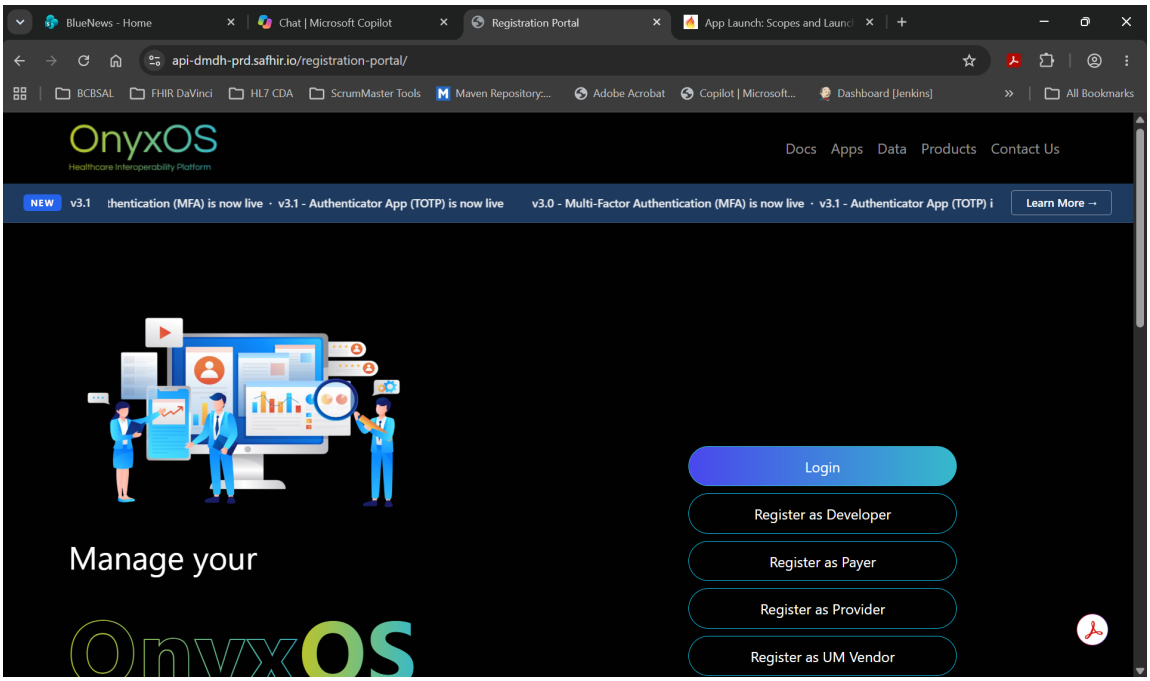
A more integrated workflow can reduce administrative burden, minimize avoidable delays and rework, and help members receive medically necessary care sooner. The API applies to prior authorization for covered medical items and services and does not include drugs at this time. Responses may approve the request, deny the request for a specific reason, request additional information, or indicate that the request remains under review. Please note that use of the API does not guarantee approval; requests remain subject to the member's eligibility, benefits, medical-necessity criteria, and applicable BCBSAL policies.

Implementation Guides:
Coverage Requirements Discovery (CRD)
Documentation Templates and Rules (DTR)
Prior Authorization Support (PAS)

[CMS Interoperability and Prior Authorization Final Rule (CMS-0057-F)]

Application Registration for the FHIR Electronic Prior Authorization API

To begin, you must register by going to https://portal.safhir.io/.



If you have not registered before, select “Register as Provider” if you are registering on behalf of a provider organization, or select “Register as UM Vendor” if you are registering on behalf of a utilization management vendor. Complete the requested information and click “Continue.” This will provide access to the portal so you can register your application.

Once access is granted, log in to the portal and select “Create an Application.” Complete all required fields, including the application name, callback URL (also known as the redirect URI), organization and contact information, and the privacy and security policy URLs requested by the portal. Select the Electronic Prior Authorization for the BCBSAL UAT environment, and submit the application. After the application is approved, use “Application Credentials” to obtain the client ID, client secret, and connection URLs assigned to the application.

When registering the application, select the Electronic Prior Authorization implementation guides and access appropriate for your organization’s role. Protect the client secret, use the approved credentials only from authorized systems, and complete

any required connectivity, security, and testing activities before requesting production access.

Developer Guidelines

Security

Applications shall ensure that member privacy is secured appropriately. This includes the proper storage of keys and data leakage prevention.

Application Behavior

Applications should only access BCBSAL APIs as needed and should not be used for mass batch communication. Applications that abuse the API processes will be blocked/revoked until such time that the behavior is deemed to be legitimate and/or not detrimental to our systems. Any suspected mischievous communication will result in the application being blocked.

Support

BCBSAL will offer the following support consistent with stated government regulations and current operational guidelines.

General Support Hours

General support hours are available Monday through Friday from 8:00 am to 5:00 pm Central Time. General support is not provided on company holidays or weekends. General support hours apply to:

- Vendor registration (organization or application)

System Monitoring

BCBSAL regularly monitors system operations and responsiveness. The system is expected to be operational 24 hours a day, 7 days a week and 365 days a year, excluding maintenance windows. System functionality support is available 24 hours a day, 7 days a week and 365 days a year for:

- Vendor API Call Receipts and Responses (Support Available every day)

Registration and Response Times

The system will accept and respond to organizational and application registration submissions from third party application vendors as follows:

Registration type response times

Registration type	Estimated response time
New Vendor Registration	5 business days

Support request response times

Support request	Estimated response time
Vendor Production Support Request	24 business hours

Data feed timeframe

Data	Data feed timeframe
Claims	1 business day from adjudication
Encounter data	1 business day from receipt of encounter
Clinical data	1 business day from receipt of data
Provider directory	30 calendar days of BCBSAL receiving provider directory information OR an update to provider directory information
Pharmacy directory	30 calendar days of BCBSAL receiving provider directory information OR an update to provider directory information

Contact Us

For any question or concerns regarding registering your organization or application please contact **fhirsupport@bcbsal.org**.