Patient Access API Documentation

This document helps third party application owners develop and integrate their applications with Patient Access APIs. Medicare Members who consent to have their data shared with third party application providers of their choice can then access their clinical information on such applications.

There are three sections in this document which shows the entire workflow needed to integrate successfully: -

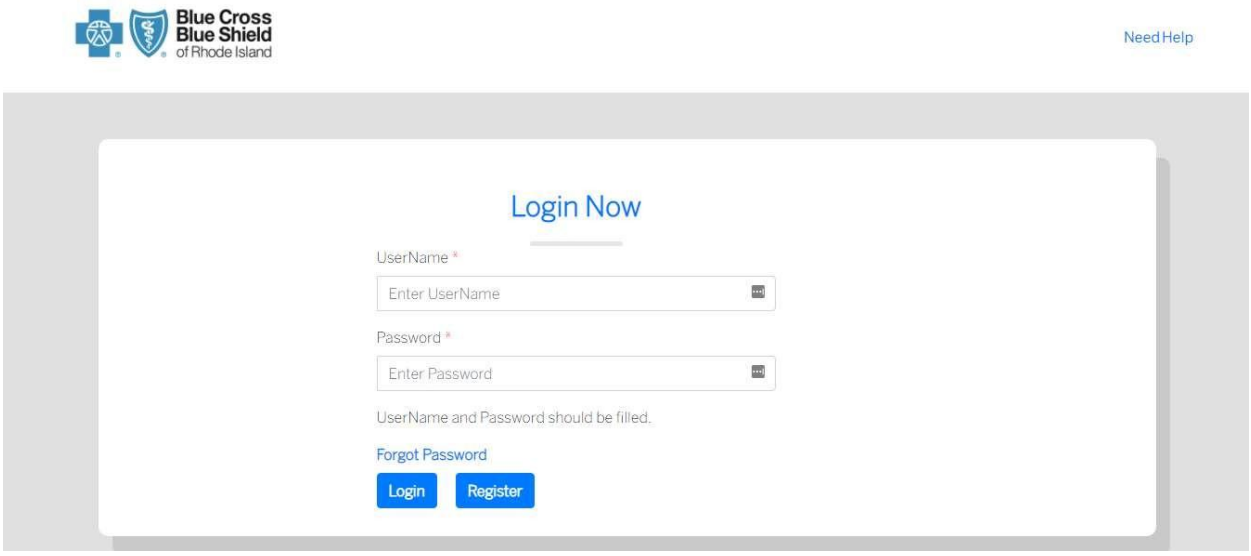
Developer Registration: This section shows how a third-party application owner can register their application on the BCBSRI Developer Portal

Member Consent and Token Generation: This section shows how the member providing consent to the third-party application, provides his/her consent for their dependents. The Token generated in the process needs to be utilized for hitting the api endpoints and retrieving information.

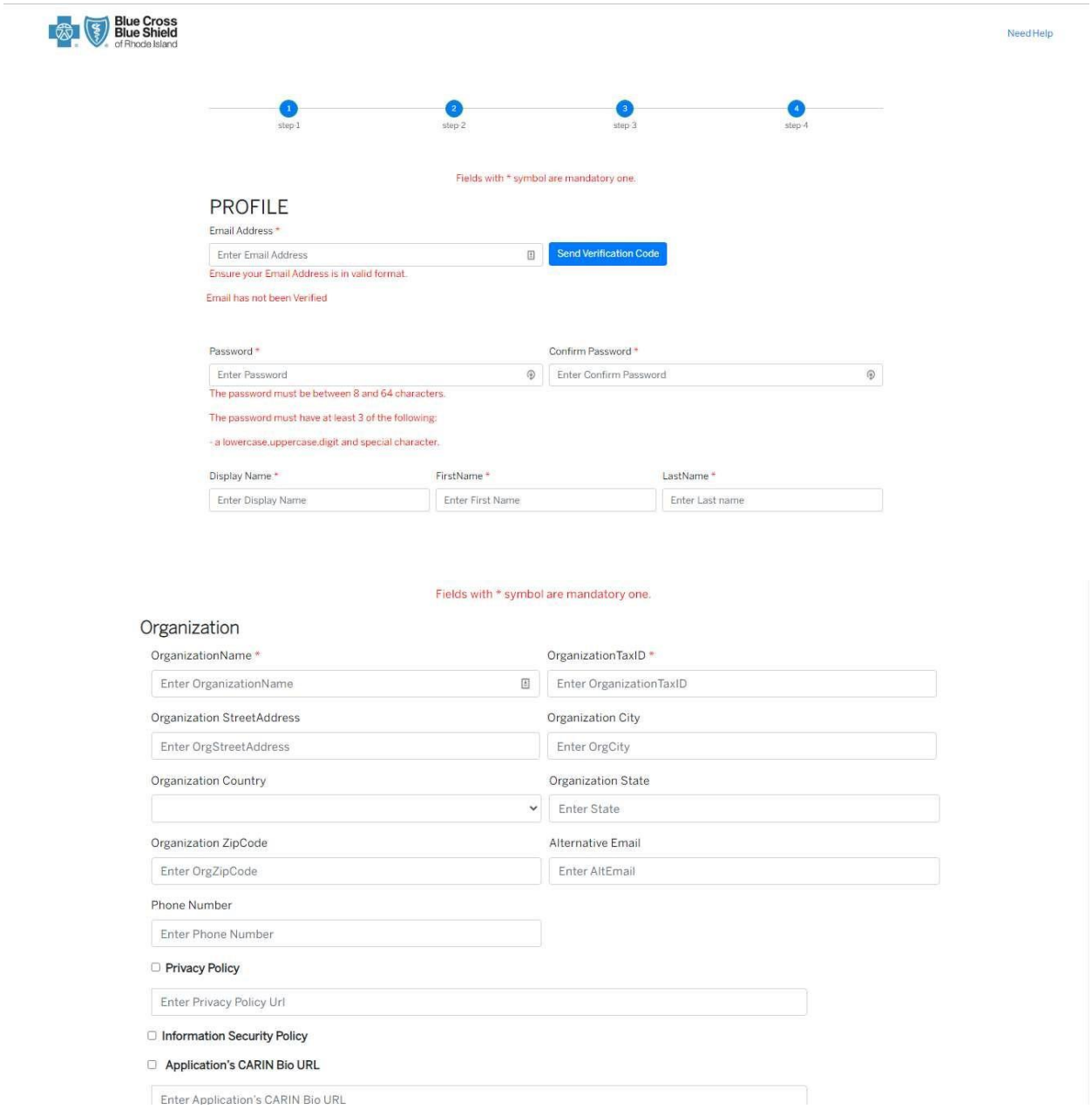
API Endpoints: This section shows the URLs and end point details that need to be utilized to retrieve the data

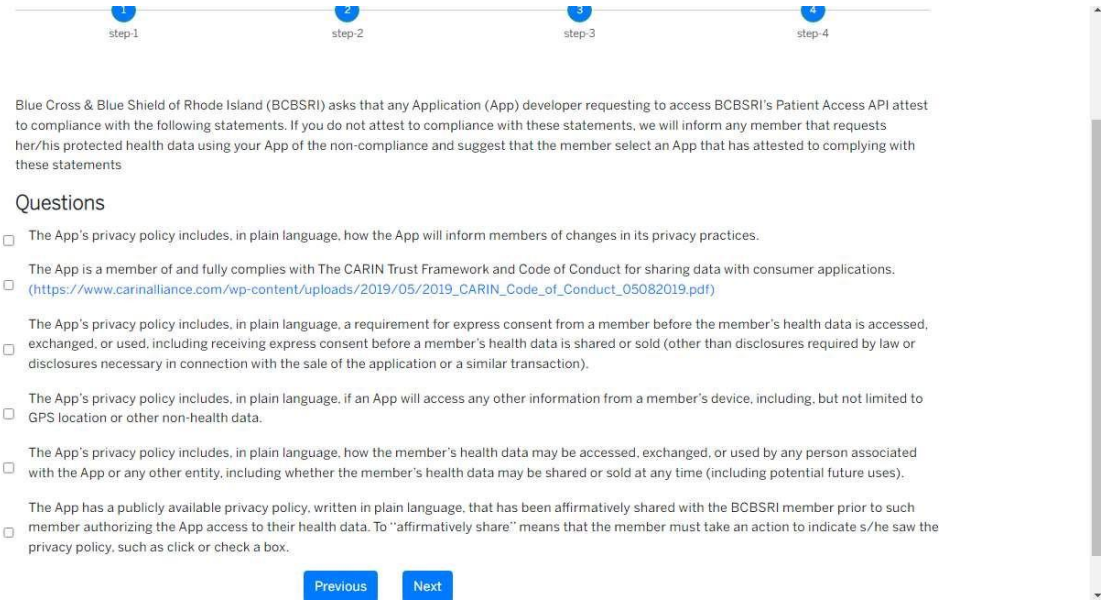
Developer Registration

Open Developer portal: https://developerportal.bcbsri.com/landing

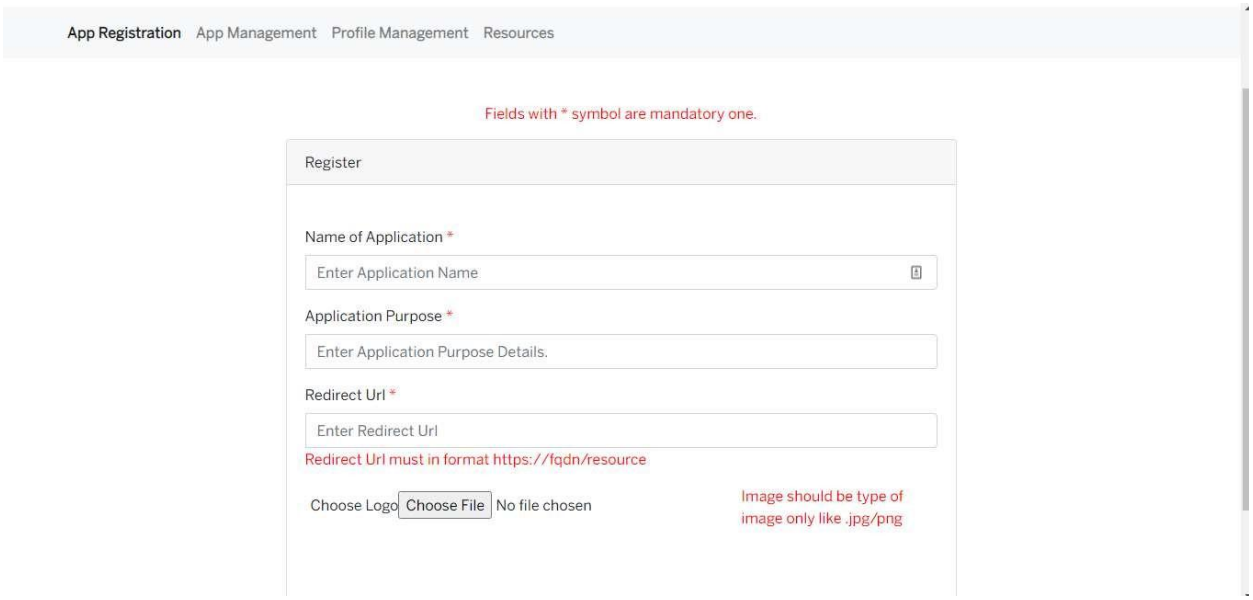


Register as developer in developer portal

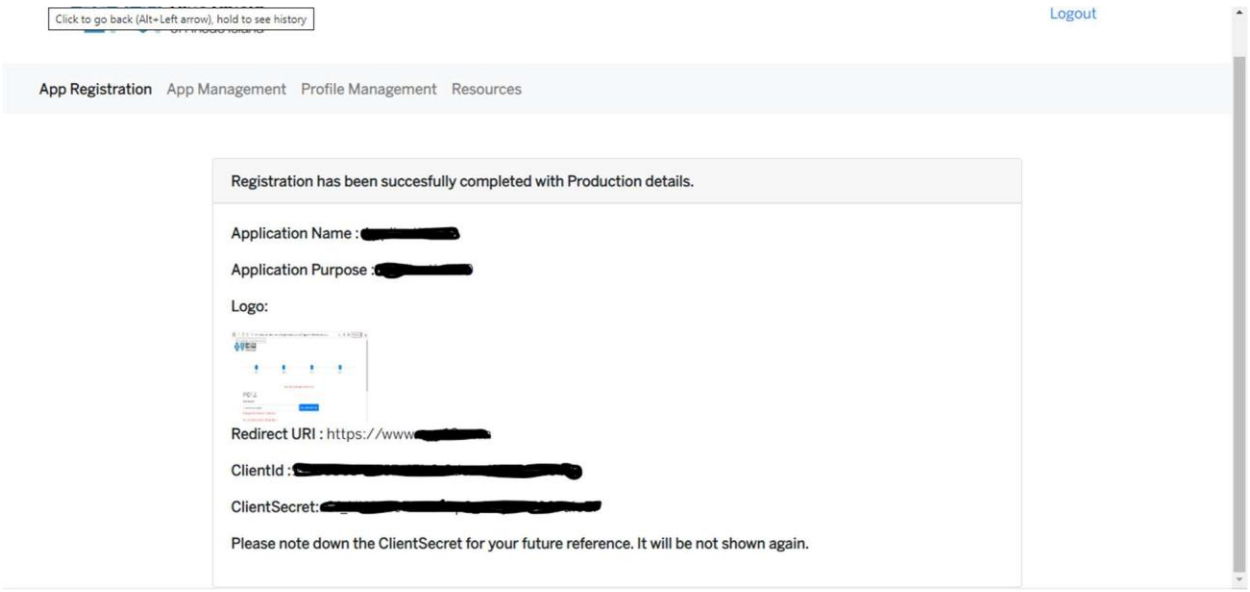




After successful registration, login to developer portal and register the app



Once app successfully registered, client id and client secret are generated, and it will be shown on the screen.



Member Consent and Token Generation

Metadata

The metadata endpoint provides access to the FHIR Capability Statement of the server.

Endpoint: GET https://<baseurl>/metadata

Parameters: None

Baseurl: https://api.bcbsri.com/PatientAccessAPI/fhir

Steps To Generate Authorization Token.

1. The third-party application developer refers to the metadata URL to configure & access the Patient Access APIs. Metadata listed the OAuth, resource endpoints & other required URL details.

2. The developer will integrate the OAuth URL with the required query parameters which are listed below. OAuth URL:

https://b2cbcbsricmsprod.b2clogin.com/b2cbcbsricmsprod.onmicrosoft.com/oauth2/v2.0/authorize?p=B2C_1A_MemberPortal_signup_signin

Query parameters

a. Client_id: Registered Application Id
b. redirect_uri: Third Party Application Redirect URI

c. scope: OpenID is an authentication protocol built on OAuth 2.0 that you can use to securely sign in a user to an application

d. response_type: code: <use to get the refresh token from redirect URI. e. Prompt: login

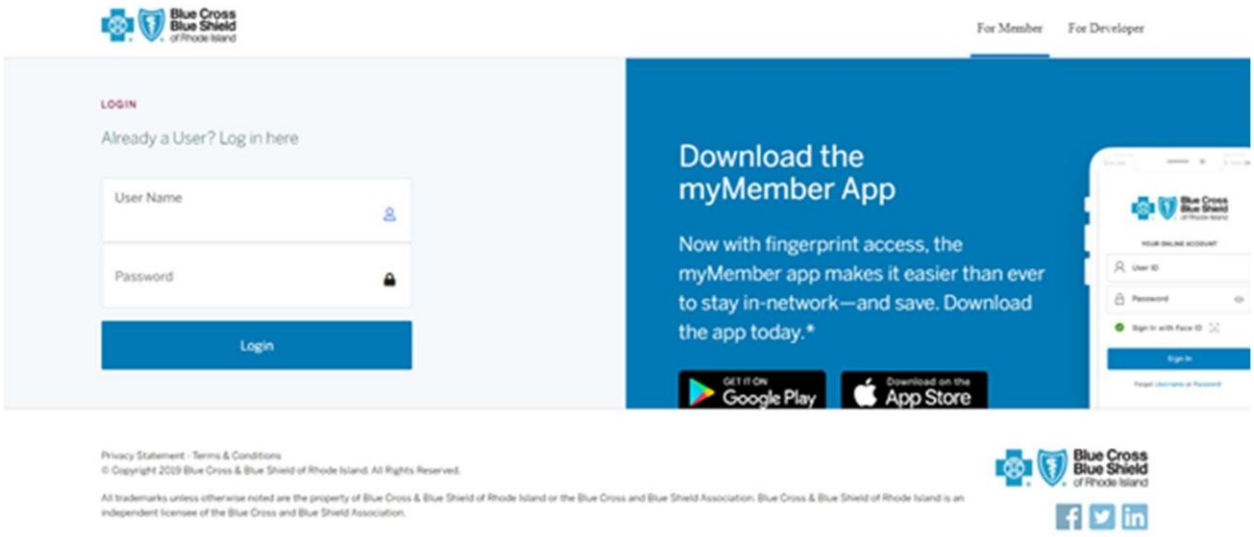
Login page

Integrated Authorization URL Example:
https://b2cbcbsricmsprod.b2clogin.com/b2cbcbsricmsprod.onmicrosoft.com/oauth2/v2.0/authorize?p=B2C_1A_MemberPortal_signup_signin&client_id=<client_id>&nonce=defaultNonce&redirect_uri=<redirect_url>&scope=openid&response_type=code&prompt=login

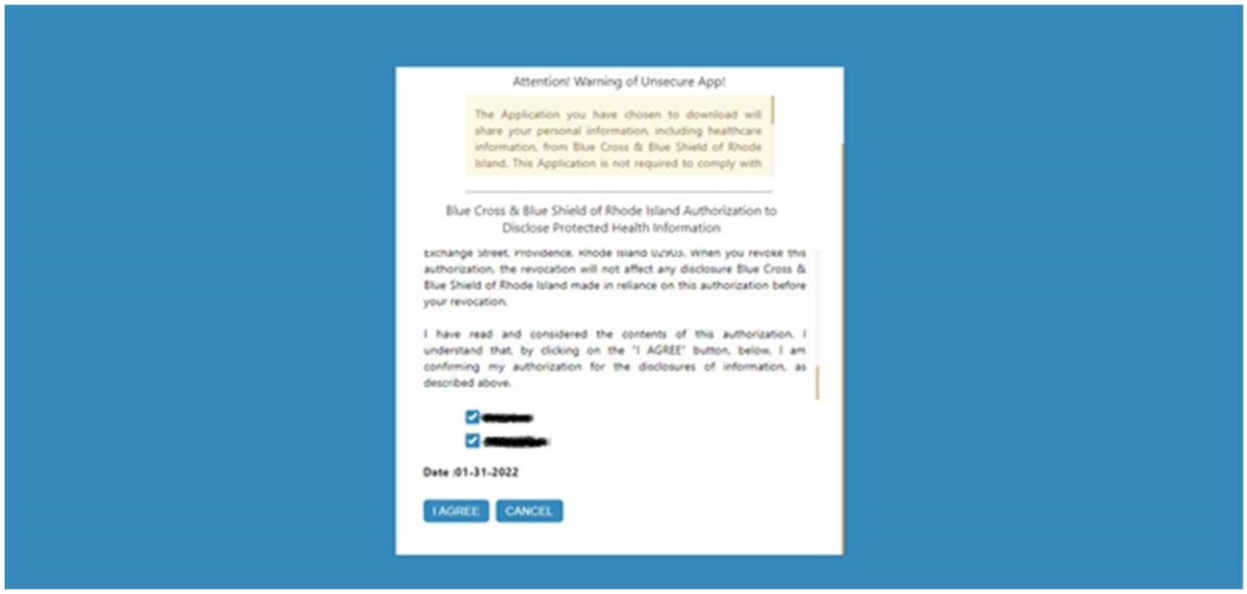
2.1. Developer uses the integrated Authorization URL, where it Navigate to the login page to provide user credentials.

2.2. Authentication URL redirects to Member Portal login.

2.3. Login to the registered app with BCBSRI User id and Password.



2.4. On the Successful Authentication, the Consent page will be prompted to the user and can consent to one or multiple members (If dependent is added). Consent page will be shown first time.



2.5. Once user gives consent and clicks on agree button Authorization code will be generated and will be returned in the response under “code”.

Steps To Generate Access token and Refresh Token from the Authorization code generated in previous step.

1. Get a refresh token using below POST query

Token URL:
https://b2cbcbsricmsprod.b2clogin.com/b2cbcbsricmsprod.onmicrosoft.com/oauth2/v2.0/token?p=b2c_1a_memberportal_signup_signin

Post Header:

Content-Type: application/x-www-form-urlencoded

Post Body:

grant_type=authorization_code

client_id=<client id> scope=<client id> offline_access

openID code=<AuthorizationCode generated in

previous steps>

redirect_uri=redirect URL

Response Body:

{

"access_token": "access token to BCBSRI patient access API",

"id_token": "can be used in place of access token to access BCBSRI patient Access API",

"token_type": "Bearer",

"not_before": ,

"expires_in": ,

"expires_on": ,

"resource": "",

"id_token_expires_in": 3600,

"profile_info": "",

"scope": "client_id openid offline_access",

"refresh_token": "refresh token to call refresh token URL and get new tokens once access token gets expires",

"refresh_token_expires_in": <refresh token expire time after this time expires User need to re-login again via BCBSRI member portal>

}

2. The Access Token will be generated in a Redirect URI.

3. With the generated token the user can be able to access the Patient Access.

Note:

1. Using generated bearer access token user can access data using Patient Access API end points provided in below section.

2. Token decoding is not required.

Steps to generate Access Token using Refresh token from below POST query

Token URL:
https://b2cbcbsricmsprod.b2clogin.com/b2cbcbsricmsprod.onmicrosoft.com/oauth2/v2.0/token?p=b2c_1a_memberportal_signup_signin

Post Header:

Content-Type: application/x-www-form-urlencoded

POST Body: grant_type=refresh_token

client_id=<client_id>

scope=<client_id> openid

offline_access

refresh_token=<refresh token

generated in previous step>

redirect_uri=Redirect URL

The Access Token will be generated in a Redirect URI.

API Endpoints

Resource Types which can be accessed via BCBSRI Patient API:

Sl.No.	Resource Types
1	AllergyIntolerance
2	Condition
3	Coverage
4	Claim
5	CarePlan
6	CareTeam
7	Device
8	DiagnosticReport
9	DocumentReference
10	Encounter
11	ExplanationOfBenefit
12	Immunization
13	Location
14	Medication
15	MedicationDispense
16	MedicationRequest
17	MedicationKnowledge
18	Observation
19	Organization
20	Patient

21	Practitioner
22	PractitionerRole
23	Procedure
24	Provenance
25	Basic
26	InsurancePlan

Requests – Params

Name	Required	Type	Description	Example
_id	False	string	System identifier of resource.	_id = d10956b0-8e50-49af-8db2-288xxxxx
_ lastUpdated	False	Date	Last updated date of resource type	_lastUpdated = gt2010-10-01
_count	False	Integer	Size of results page	_count = 5
identifier	False	String	System Value identifier Pair	Identifier=system|value
status	False	String	Resource Status	status=active
category	False	String	Category type of resource.	category=system|code
code	False	String	Code of resource	code=system|code
type	False	String	Type of resource	type=system|code
date	False	Date	Date of the occurrence	date=gt2010-10-01
clinical-status	False	String	Clinical Status of the resource	clinical-status=active
patient	False	String	Patient reference of the resource. Use with patient FHIR Id.	patient=Patient/ d10956b0-8e50-49af-8db2-288xxxxx

Basic, InsurancePlan and MedicationKnowledge provide formulary information to users authorized to access the Patient Access API. Formulary data is not member-specific and does not require a patient search parameter.

Apart from the above parameters, it also supports the _revinclude=Provenance:target for applicable resources. (Please refer to the subsequent sections for detail.)

In case of _lastupdated and date the comparators allowed are: eq, ne, gt, ge, lt, le, sa, eb, ap

Also, this parameter works only when _id parameter is present. i.e. It returns Provenance resource only for a single resource when searched using _id in query.

Brief descriptions for each resource type:

AllergyIntolerance

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

Endpoint: GET
https://<baseurl>/PatientAccessAPI/fhir/AllergyIntolerance?_id={Ids}[&patient=Patient/{patientId}][&clinical-status={status}][&_count][&_lastUpdated] }[&_revinclude=Provenance:target]

For search using reverse include, the resource Id _id={Ids} is required.

Parameters:

Name	Required	Type	Description
_id	False	string	System identifier of resource.
_revinclude=Provenance:target	False	string	Returns related Provenance resource in result.
_ lastUpdated	False	date	Last updated date of resource type
_count	False	integer	Size of results page
clinical-status	False	string	Clinical Status of the Allergy
patient	False	string	Patient reference of the resource

AllergyIntolerance By Id

Retrieve the AllergyIntolerance resource by id

Endpoint: GET https://<baseurl>/ AllergyIntolerance /{id}

Parameters: None

Basic

The Basic resource represents a Formulary Item linking a formulary drug to a Formulary plan, including drug tier and pharmacy benefit type.

Endpoint: GET https://<baseurl>/Basic?_id={Ids}[&code={code}][&drug-tier={drugTier}][&pharmacy-benefit-type={pharmacyBenefitType}][&formulary=InsurancePlan/{id}][&subject=MedicationKnowledge/{id}][&_count={count}][&_lastUpdated={date}][&_sort={sort}][&_include=Basic:subject][&_include=Basic:formulary]

Parameters:

Name	Required	Type	Description
_id	False	string	System identifier of resource.
_lastUpdated	False	date	Last updated date of resource type
_count	False	integer	Size of results page. Default 50; maximum 100.
_sort	False	string	Sort by _id, _lastUpdated, code, drug-tier, pharmacy-benefit-type. Use a comma for multiple fields and - for descending order.
code	False	string	Code of the formulary item. Use as code=system|code
drug-tier	False	string	Drug tier of the formulary item.
pharmacy-benefit-type	False	string	Pharmacy benefit type of the formulary item.
formulary	False	string	Reference to the Formulary plan. Use as formulary=InsurancePlan/{id}
subject	False	string	Reference to the formulary drug. Use as subject=MedicationKnowledge/{id}
_include	False	string	Use Basic:subject to return the linked MedicationKnowledge resource and Basic:formulary to return the linked InsurancePlan resource. Repeat _include to request both.

Search by the linked drug name using subject:MedicationKnowledge.drug-name={value} or subject:MedicationKnowledge.drug-name:contains={value}.
Search by the linked drug code using subject:MedicationKnowledge.code={system|code}.

Basic By Id

Retrieve the Basic resource by id.

Endpoint: GET https://<baseurl>/Basic/{id}

Parameters: None.

Condition

This resource is used to record detailed information about a condition, problem, diagnosis or other event, situation, issue or clinical concept that has risen to a level of concern.

Endpoint: GET
https://<baseurl>/PatientAccessAPI/fhir/Condition?_id={Ids}[&patient=Patient/{patientId}][&clinical-status={status}][&category={category}][&code={code}][&_count][&_lastUpdated]
}[&_revinclude=Provenance:target]

For search using reverse include, the resource Id _id={Ids} is required.

Parameters:

Name	Required	Type	Description
_id	False	string	System identifier of resource.
_revinclude=Provenance:target	false	string	Returns related Provenance resource in result.
_ lastUpdated	False	date	Last updated date of resource type
_count	False	integer	Size of results page
clinical-status	False	string	Clinical Status of the resource
category	False	string	Category type of resource. Use as category=system|code
patient	False	string	Patient reference of the resource
code	False	string	Code of the resource. Use as code=system|code

Condition By Id

Retrieve the Condition resource by id

Endpoint: GET https://<baseurl>/Condition/{id}

Parameters: None.

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.

The Patient Access API implements the FHIR Coverage Resource. The Coverage resource supports reading the current state of the resource using the Logical (Unique) ID.

Endpoint: GET https://<baseurl>/Coverage?_id={Ids}[&patient=Patient/{patientId}][&_count][&_lastUpdated]

Parameters:

Name	Required	Type	Description
_id	False	string	System identifier of resource.
_ lastUpdated	False	date	Last updated date of resource type
patient	False	string	Patient reference of the resource
_count	False	integer	Size of results page

Coverage By Id

The Patient Access API implements the FHIR Coverage Resource. The Coverage resource supports to Read current state of the resource using the Logical (Unique) ID.

Retrieve the Coverage resource by id.

Endpoint: GET https://<baseurl>/Coverage/{id}

Parameters: None.

Claim

The Claim resource is used to request the adjudication and/or authorization of a set of healthcarerelated goods and services for a patient against the patient's insurance coverages, or to request what the adjudication would be for a supplied set of goods or services should they be actually supplied to the patient.

Endpoint: GET
https://<baseurl>/Claim?_id={Ids}[&patient=Patient/{patientId}][&identifier={identifierValue}][&status={statusValue}][&_count][&_lastUpdated]

Parameters:

Name	Required	Type	Description
_id	False	string	System identifier of resource.
_ lastUpdated	False	date	Last updated date of resource type
_count	False	integer	Size of results page
status	False	string	Status of the Resource
identifier	False	string	Search using the identifier and System Value pair. Use as identifier=system|value
patient	False	String	Patient reference of the resource

Claim By Id

Retrieve the Claim resource by id.

Endpoint: GET https://<baseurl>/Claim/{id}

Parameters: None.

CarePlan

Describes the intention of how one or more practitioners intend to deliver care for a particular patient, group or community for a period of time, possibly limited to care for a specific condition or set of conditions.

Endpoints: GET
https://<baseurl>/CarePlan?_id={Ids}[&patient=Patient/{patientId}][&identifier={identifierValue}][&status={statusValue}][&_count][&_lastUpdated]

Parameters:

Name	Required	Type	Description
_id	False	string	System identifier of resource.

_ lastUpdated	False	date	Last updated date of resource type
_count	False	integer	Size of results page
status	False	String	Status of the resource
identifier	False	String	Search using the identifier and System Value pair. Use as identifier=system|value
patient	False	String	Patient reference of the resource

CarePlan By Id

Retrieve the Claim resource by id.

Endpoint: GET https://<baseurl>/CarePlan/{id}

Parameters: None.

CareTeam

The Care Team includes all the people and organizations who plan to participate in the coordination and delivery of care.

Endpoints: GET
https://<baseurl>/CareTeam?_id={Ids}[&patient=Patient/{patientId}][&identifier={identifierValue}][&status={statusValue}][&_count][&_lastUpdated]

Parameters:

Name	Required	Type	Description
_id	False	string	System identifier of resource.
_ lastUpdated	False	date	Last updated date of resource type
_count	False	integer	Size of results page
status	False	String	Status of the resource

identifier	False	String	Search using the identifier and System Value pair. Use as identifier=system|value
patient	False	String	Patient reference of the resource

CareTeam By Id

Retrieve the Claim resource by id.

Endpoint: GET https://<baseurl>/CareTeam/{id}

Parameters: None.

Device

A type of a manufactured item that is used in the provision of healthcare without being substantially changed through that activity. This device may be a medical or non-medical.

Endpoint:
GET https://<baseurl>/Device?_id={Ids}[&patient=Patient/{patientId}][&_count][&_lastUpdated]}[&_revinclude=Provenance:target]

For search using reverse include, the resource Id _id={Ids} is required.

Parameters:

Name	Required	Type	Description
_id	False	string	System identifier of resource.
_revinclude=Provenance:target	False	string	Returns related Provenance resource in result.
_ lastUpdated	False	date	Last updated date of resource type
_count	False	integer	Size of results page
patient	False	String	Patient reference of the resource

Device By Id

Retrieve the Claim resource by id.

Endpoint: GET https://<baseurl>/Device/{id}

Parameters: None.

DiagnosticReport

The findings and interpretation of diagnostic tests performed on patients, groups of patients, devices and locations and/or specimens derived from these. The report includes clinical context such as requesting and providing information and some mix of atomic results, images textual and coded interpretations and formatted representation of diagnostic

Endpoint: GET
https://<baseurl>/DiagnosticReport?_id={Ids}[&patient=Patient/{patientId}][&category={category}][&code={code}][&_count][&_lastUpdated] }[&_revinclude=Provenance:target]

For search using reverse include, the resource Id _id={Ids} is required.

Parameters:

Name	Required	Type	Description
_id	false	string	System identifier of resource.
_revinclude=Provenance:target	false	string	Returns related Provenance resource in result.
_ lastUpdated	false	date	Last updated date of resource type
_count	false	integer	Size of results page
category	false	string	Category type of Resource. Use as category=system|code
code	false	string	Code of the resource. Use as code=system|code
patient	False	String	Patient reference of the resource

DiagnosticReport By Id

The findings and interpretation of diagnostic tests performed on patients, groups of patients, devices and locations and/or specimens derived from these. The report includes clinical context such as requesting and providing information and some mix of atomic results, images textual and coded interpretations and formatted representation of diagnostic.

Retrieve the Diagnostic Reports resource by id.

Endpoint: GET https://<baseurl>/DiagnosticReport/{id}

Parameters: None.

DocumentReference

A reference to a document of any kind for any purpose. Provides metadata about the document so that the document can be discovered and managed. The scope of a document is any serialized object with the mime-type, so includes formal patient centric documents (CDA), clinical notes, scanned paper and non-patient specific documents like policy text.

Endpoint: GET
https://<baseurl>/DocumentReference?_id={Ids}[&patient=Patient/{patientId}][&category={category}][&code={code}][&_count][&_lastUpdated] }[&_revinclude=Provenance:target]

For search using reverse include, the resource Id _id={Ids} is required.

Parameters:

Name	Required	Type	Description
_id	false	string	System identifier of resource.
_revinclude=Provenance:target	false	string	Returns related Provenance resource in result.
_ lastUpdated	false	date	Last updated date of resource type
_count	false	integer	Size of results page
category	false	string	Category type of the Resource. Use as category=system|code
code	false	string	Code of the resource. Use as code=system|code
patient	False	String	Patient reference of the resource

DocumentReference By Id

Retrieve the DocumentReference resource by id.

Endpoint: GET https://<baseurl>/DocumentReference/{id}

Parameters: None.

Encounter

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

Endpoint: GET https://<baseurl>/Encounter?_id={Ids}[&patient=Patient/{patientId}][&date={date}][&_count][&_lastUpdated][&start-date={date}][&_revinclude=Provenance:target]

For search using reverse include, the resource Id _id={Ids} is required.

Parameters:

Name	Required	Type	Description
_id	false	string	System identifier of resource.
_revinclude=Provenance:target	false	string	Returns related Provenance resource in result.
_ lastUpdated	false	date	Last updated date of resource type
_count	false	integer	Size of results page
date	false	date	A date within the actualPeriod the Encounter lasted
start-date	false	date	A Encounter start date. Use as start-date={date}
patient	false	String	Patient reference of the resource

Encounter By Id

Retrieve the Encounter resource by id.

Endpoint: GET https://<baseurl>/Encounter/{id}

Parameters: None.

ExplanationOfBenefit

The ExplanationOfBenefit (EOB) resource combines key information from a Claim, a ClaimResponse and optional Account information to inform a patient of the goods and services rendered by a provider and the settlement made under the patient's coverage in respect of that Claim. The ExplanationOfBenefit resource may also be used as a resource for data exchange for bulk data analysis, as the resource encompasses Claim, ClaimResponse and Coverage/Eligibility information.

The Patient Access API implements HL7 FHIR standards to meet the CMS requirements for interoperability. The API enables members to access their claims and encounter information using Third-Party client applications. A request for Explanation Of Benefit resource will initiate a fetch that returns claims for a patient from claims data sources.

Endpoint: GET
https://<baseurl>/ExplanationOfBenefit?_id={Ids}[&patient=Patient/{patientId}][&type={type}][&_count][&_lastUpdated]
Parameters:

Name	Required	Type	Description
_id	false	string	System identifier of resource.
_ lastUpdated	false	date	Last updated date of resource type
_count	false	integer	Size of results page
type	false	string	Type of the resource. Use as type=system|code
patient	false	string	Patient reference of the resource

ExplanationOfBenefit By id

Retrieve the Explanation of Benefits resource by id.

Endpoint: GET https://<baseurl>/ExplanationOfBenefit/{id}

Parameters: None.

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.

Endpoint: GET
https://<baseurl>/Immunization?_id={Ids}[&patient=Patient/{patientId}][&status={status}][&_count][&_lastUpdated] }[&_revinclude=Provenance:target]

For search using reverse include, the resource Id _id={Ids} is required.

Parameters:

Name	Required	Type	Description
_id	false	string	System identifier of resource.
_revinclude=Provenance:target	false	string	Returns related Provenance resource in result.
_ lastUpdated	false	date	Last updated date of resource type
_count	false	integer	Size of results page
status	false	string	Status of the resource
patient	false	string	Patient reference of the resource

Immunization By Id

Retrieve the Immunization resource by id.

Endpoint: GET https://<baseurl>/Immunization/{id}

Parameters: None.

InsurancePlan

The InsurancePlan resource represents a Payer Insurance Plan or a Formulary plan. A Payer Insurance Plan can reference the Formulary plans it covers.

Endpoint: GET
https://<baseurl>/InsurancePlan?_id={Ids}[&identifier={identifierValue}][&name={name}][&type={type}][&formulary-coverage=InsurancePlan/{id}][&_count={count}][&_lastUpdated={date}][&_sort={sort}][&_include=InsurancePlan:formulary-coverage]

Parameters:

Name	Required	Type	Description
_id	False	string	System identifier of resource.
_lastUpdated	False	date	Last updated date of resource type

Name	Required	Type	Description
_count	False	integer	Size of results page. Default 50; maximum 100.
_sort	False	string	Sort by _id, _lastUpdated, identifier, name, type. Use a comma for multiple fields and - for descending order.
identifier	False	string	Search using the identifier and System Value pair. Use as identifier=system|value
name	False	string	Name of the insurance plan.
type	False	string	Type of the insurance plan. Use as type=system|code
formulary-coverage	False	string	Reference to the Formulary plan covered by the Payer Insurance Plan. Use as formulary-coverage=InsurancePlan/{id}
_include	False	string	Use InsurancePlan:formulary-coverage to return the linked Formulary plan resource.

InsurancePlan By Id

Retrieve the InsurancePlan resource by id.

Endpoint: GET https://<baseurl>/InsurancePlan/{id}

Parameters: None.

Location By Id

A Location includes both incidental locations (a place which is used for healthcare without prior designation or authorization) and dedicated, formally appointed locations. Locations may be private, public, mobile or fixed and scale from small freezes to full hospital buildings or parking garages. Manage the collection of resources of type Location.

Note: Id is mandatory

Endpoint: GET https://<baseurl>/Location/{id}

Parameters: None.

Medication By Id

The Medication resource allows for medications to be characterized by the form of the drug and the ingredient (or ingredients), as well as how it is packaged. The medication will include the ingredient(s) and their strength(s) and the package can include the amount (for example, number of tablets, volume, etc.) that is contained in a particular container (for example, 100 capsules of Amoxicillin 500mg per bottle).

Note: Id is mandatory

Endpoint: GET https://<baseurl>/Medication/{id}

Parameters: None.

MedicationDispense

Indicates that a medication product is to be or has been dispensed for a named person/patient. This includes a description of the medication product (supply) provided and the instructions for administering the medication. The medication dispense is the result of the pharmacy system responding to a medication order.

Endpoint: GET
https://<baseurl>/MedicationDispense?_id={Ids}[&patient=Patient/{patientId}][&status={status}][&_count][&_lastUpdated] }[&_revinclude=Provenance:target]

For search using reverse include, the resource Id _id={Ids} is required.

Parameters:

Name	Required	Type	Description
_id	false	string	System identifier of resource.
_revinclude=Provenance:target	false	string	Returns related Provenance resource in result.
_ lastUpdated	false	date	Last updated date of resource type
_count	false	integer	Size of results page
status	status	string	Status of the resource
patient	status	string	Patient reference of the resource

MedicationDispense By Id

Retrieve the Medication Dispense resource by id.

Endpoint: GET https://<baseurl>/MedicationDispense/{id}

Parameters: None.

MedicationRequest

An order or request for both supply of the medication and the instructions for administration of the medication to a patient. The resource is called "MedicationRequest" rather than "MedicationPrescription" or "MedicationOrder" to generalize the use across inpatient and outpatient settings, including care plans, etc., and to harmonize with workflow patterns.

Endpoint: GET https://<baseurl>/MedicationRequest?_id={Ids}[&patient=Patient/{patientId}][&status={status}][&_count][&_lastUpdated]

Parameters:

Name	Required	Type	Description
_id	false	string	System identifier of resource.
_revinclude=Provenance:target	false	string	Returns related Provenance resource in result.
_ lastUpdated	false	date	Last updated date of resource type
_count	false	integer	Size of results page
status	status	string	Status of the resource
patient	status	string	Patient reference of the resource

MedicationRequest By Id

Retrieve the Medication Dispense resource by id.

Endpoint: GET https://<baseurl>/MedicationDispense/{id}

Parameters: None.

MedicationKnowledge

This resource supports use cases for creation of and querying for drug information including attributes such as drug classifications, images of medications, drug costs and/or coverages, etc. This resource can be used to return drug information as part of a formulary or a catalogue.

Note: Search by code or drug name.

These parameters are optional.

Endpoint: GET

https://<baseurl>/MedicationKnowledge?_id={Ids}[&code={code}][&drug-name={drugName}][&_count={count}][&_lastUpdated={date}][&_sort={sort}]

Parameters:

Name	Required	Type	Description
_id	False	string	System identifier of resource.
_lastUpdated	False	date	Last updated date of resource type
_count	False	integer	Size of results page. Default 50; maximum 100.
_sort	False	string	Sort by _id, _lastUpdated, code, drug-name. Use a comma for multiple fields and - for descending order.
code	False	string	Code of the formulary drug. Use as code=system|code
drug-name	False	string	Name of the formulary drug. Use drug-name:contains={value} for a contains search.

MedicationKnowledge By Id

This resource supports use cases for creation of and querying for drug information including attributes such as drug classifications, images of medications, drug costs and/or coverages, etc. This resource can be used to return drug information as part of a formulary or a catalogue.

Note: Id is mandatory

Endpoint: GET https://<baseurl>/MedicationKnowledge/{id}

Parameters: None.

Observation

This resource will retrieve all observation details associated with a patient using the patient identifier and formats the response to the Observation

Endpoint: GET
https://<baseurl>/Observation?_id={Ids}[&patient=Patient/{patientId}][&category={category}][&code={code}][&date={date}][&_count][&_lastUpdated] }[&_revinclude=Provenance:target]

For search using reverse include, the resource Id _id={Ids} is required.

Parameters:

Name	Required	Type	Description
_id	false	string	System identifier of resource.
_revinclude=Provenance:target	false	string	Returns related Provenance resource in result.
_ lastUpdated	false	date	Last updated date of resource type
_count	false	integer	Size of results page
category	false	string	Category type of resource. Use as category=system|code
code	false	string	Code of the resource. Use as code=system|code
date	false	date	Date of the occurrence
patient	false	string	Patient reference of the resource

Observation By Id

This resource will retrieve all observation details associated with a patient using the patient.identifier

and formats the response to the Observation Retrieve the Observation resource by id.

Endpoint: GET https://<baseurl>/Observation/{id}

Parameters: None.

Organization By Id

The Organization resource is used for collections of people that have come together to achieve an objective. The Group resource is used to identify a collection of people (or animals, devices, etc.) that are gathered for the purpose of analysis or acting upon but are not expected to act themselves.

Note: Id is mandatory

Endpoint: GET https://<baseurl>/Organization/{id}

Patient

This resource API implements the HL7 FHIR standards and provides the ability to access their data using Third-Party client applications supporting those standards.

The data in the Resource covers the "who" information about the patient: its attributes are focused on the demographic information necessary to support the administrative, financial and logistic procedures.

Endpoint: GET https://<baseurl>/Patient?_id={Ids}[&_count][&_lastUpdated]
Parameters:

Name	Required	Type	Description
_id	false	string	System identifier of resource.
_ lastUpdated	false	date	Last updated date of resource type
_count	false	integer	Size of results page

Patient By Id

This resource allows the members to access their data using Third-Party client applications.

Retrieve the Patient resource by id.

Endpoint: GET https://<baseurl>/Patient/{id}

Parameters: None.

Practitioner By Id

Practitioner covers all individuals who are engaged in the healthcare process and healthcare-related services as part of their formal responsibilities and this Resource is used for attribution of activities and responsibilities to these individuals.

Note: Id is mandatory

Endpoint: GET https://<baseurl>/Practitioner/{id}

Parameters: None.

PractitionerRole By Id

PractitionerRole covers the recording of the location and types of services that Practitioners are able to provide for an organization.

Note: Id is mandatory

Endpoint: GET https://<baseurl>/PractitionerRole/{id}

Parameters: None.

Procedure

This resource is used to record the details of current and historical procedures performed on or for a patient. A procedure is an activity that is performed on, with, or for a patient as part of the provision of care.

Endpoint: GET
https://<baseurl>/Procedure?_id={Ids}[&patient=Patient/{patientId}][&code={code}][&type={type}][&_count][&_lastUpdated] }[&_revinclude=Provenance:target]

For search using reverse include, the resource Id _id={Ids} is required.

Parameters:

Name	Required	Type	Description
_id	false	string	System identifier of resource.
_revinclude=Provenance:target	false	string	Returns related Provenance resource in result.
_ lastUpdated	false	date	Last updated date of resource type
_count	false	integer	Size of results page
code	false	string	Code of the resource. Use as code=system|value
type	false	string	Type of the resource. Use as type=system|code

patient	false	string	Patient reference of the resource

Procedure By Id

Retrieve the Procedure resource by id.

Endpoint: GET https://<baseurl>/Procedure/{id}

Parameters: None.

Provenance By Id

Provenance of a resource is a record that describes entities and processes involved in producing and delivering or otherwise influencing that resource. Provenance provides a critical foundation for assessing, authenticity, enabling trust and allowing reproducibility Provenance assertions are a form of contextual metadata and can themselves become important records with their own provenance.

Provenance statements indicate clinical significance in terms of confidence in authenticity, reliability and trustworthiness, integrity and stage in lifecycle (e.g. Document completion – has the artifact been legally authenticated) all of which may impact security, privacy and trust policy.

Endpoint: GET https://<baseurl>/Provenance/{id}

Parameters: None.

Date Range Search filter

lastUpdated date range can be used to search and limit the records in result.

It can be provided in query param as _lastUpdated=ge<yyyy-mm-dd>&_lastUpdated=le<yyyy-mm-dd>

Here first value of *_lastUpdated* is the lower limit and the second value is upper limit of *_lastUpdated* date range.

Example:

https://api.bcbsri.com/PatientAccessAPI/fhir/Observation?_lastUpdated=ge2024-10-01&_lastUpdated=le2024-10-31

Pagination

If there are more records to come, then a next page link will be there in current response which can be called to get the next page of records.

Example:

https://api.bcbsri.com/PatientAccessAPI/fhir/Observation

In response, we can get the URL for the next page.


```
  "link": [
    {
      "relation": "next",
      "url": "https://api.bcbsri.com/PatientAccessAPI/fhir/Observation?subject=Patient%2Fe999feda-4778-4116-a10c-b5f330325ad7&ct=JM5LCoJQFAbgvZw7zIEGWh1w8Hu6yq2gfBwBNHBglwgfRURQtreGLaktRPSt4Pu83tfhY3unS3usGmIaZGbKz6b1J5h1nka32Uct%2FsJQZQV7qsiEPVeZfM1DZfSSA98PRiqVmMcqXgnDxl1ZH3PEemwlygERpDhaLIBEgKSdY5EmsFpgNAQmJIfOZWMr4jvVh1%2BFHKrLGzG5vnjapb7ffQEAAP%2F%2F"
    },
..
  ],
```


Operation Outcome

If any of the parameters passed are not correct or not supported for the specific resource the operation outcome resource will be generated, and the parameter will be ignored. However after the Operation Outcome resource the default result with correct passed parameter (if any) will be generated, as shown below,

For the URL https://api.bcbsri.com/PatientAccessAPI/fhir/Claim?_count=5 &statuss=active

As in above URL the status is not spelled correctly hence the below shown operation outcome resource will generate and the claims with _count=5 will be shown.


```
    {
        "resource": {
            "resourceType": "OperationOutcome",
            "id": "a96c8313-8040-4ab1-a9e0-58a1d5eaabe9",
            "issue": [
                {
                    "severity": "warning",
                    "code": "not-supported",
                    "diagnostics": "Unsupported search parameter was ignored: statuss"
                }
            ]
        },
        "search": {
            "mode": "outcome"
        }
    },
```