Getting Started

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

Patrius interoperability APIs enable Patrius Health 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 Patrius Health APIs, giving you the ability to build applications for Patrius Health customers and providers based on the following:

- The Patient Access API allows Patrius Health customers 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
- The Public Provider Directory API facilitates searches for Patrius Health providers, as well as allowing providers to search for other in-network providers.
- The Formulary API provides access to the Patrius Health drug formularies.

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. If you already have a third-party developer account set up here, you can click on “Login” and enter your current credentials. If you are new, then you would click “Register as Developer” and complete the information requested to receive access to the portal.
2. Select “Create New Application”. This is where you will provide the details for your application. 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 to receive your application's *Client ID* and *Client Secret* information. You will need these (along with the redirect URI and scope) to use during authentication.
4. Start using the Patrius Health APIs with your newly registered application. Once you have successfully registered your application, you can begin using the APIs.

How to Connect

Follow these steps to use your application's Client ID, Client Secret, and tokens to securely connect your application to the 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 Patrius Health APIs, you will need to utilize member authentication protocols to connect to the Patrius Health 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 on the portal and receive your client ID and secret. This is done using the website provided above. 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.

In addition, you need to select the Implementation Guides you wish to use, which are used to define the authorization components of the Patrius Health customer that will be using your application. The Patrius Health API has implemented the **SMART App Launch: Scopes and Launch Context** to manage access to a Patrius Health customer'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 Patrius Health customer 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
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 Patrius Health 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 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 Patrius Health customer, your application will send a request to the Patrius Health Identity Server to perform authentication. Then the Patrius Health Identity Server will redirect the Patrius Health customer to a Patrius Health login screen. There, the Patrius Health 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 customer will also be prompted to complete a HIPAA Authorization Form online. This is required to proceed with access to the API.

Upon the Patrius Health customer 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 Patrius Health customer that logged in, allowing you to pass data back to the Patrius Health customer.

Request authorization from user

To allow a user to authorize your application, direct them to PATRIUS HEALTH's `/authorize` endpoint: https://api-patrius-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-patrius-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 Patrius Health 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 Patrius Health customer will be directed to a Patrius Health sign in page through browser re-directs, where they will provide their Patrius Health credentials to authenticate themselves. Upon completing sign-in, the customer will be presented with an authorization page. Once the customer authorizes your application, your application can now exchange the code provided in the redirected request for a full token to make calls to the Patrius Health FHIR server, using a POST operation.

Patient Access Overview

The Patient Access API is used to build applications that enable Patrius Health customers 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 Patrius Health customer'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 draft 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

Patrius Health 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 Patrius Health 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 Patrius Health 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, an 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 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-patrius-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-patrius-prd.safhir.io/v1/api/carin-bb/openapi.json

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

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

Formulary: https://api-patrius-prd.safhir.io/v1/api/formulary-net/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 PharmacyExplanationOfBenefit 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 Patrius Health 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 Patrius Health 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 a 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

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-patrius-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 Patrius Health FHIR pharmacy proxy 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 Patrius Health 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 Patrius Health 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 Patrius Health 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**.

Public Provider Directory

Overview

The Public Provider Directory API accesses the Patrius Health 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

Patrius Health's Public Provider Directory FHIR server does not maintain any records that can be associated with a consumer. Therefore, the 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 string literal 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 Patrius Health 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-patrius-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**.

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 Patrius Health 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

Patrius Health 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

Patrius Health 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 Patrius Health receiving provider directory information OR an update to provider directory information
Pharmacy directory	30 calendar days of Patrius Health 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@PatriusHealth.com**.