



LOS ANGELES COUNTY
**DEPARTMENT OF
MENTAL HEALTH**
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LACDMH
PROVIDER DIRECTORY API
COMPANION GUIDE

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1. Introduction

This document serves as a companion guide to the Provider Directory API maintained by the Los Angeles County Department of Mental Health (DMH) as required by state and federal mandates. The API provides access to a comprehensive directory of healthcare providers. The goal of this guide is to supplement the FHIR standard specifications by outlining DMH-specific requirements, usage details, and best practices.

The Provider Directory API follows the FHIR v4.0.1 standard, and this guide assumes basic familiarity with FHIR resources and terminology. For complete FHIR documentation, refer to the official FHIR specification.

2. Legal Background

The Provider Directory API is required to comply with several legal and regulatory mandates, primarily at both the federal and state levels. These mandates focus on improving access to healthcare provider information, enhancing care coordination, and ensuring the accuracy and availability of provider data. Key mandates driving the requirement for a Provider Directory API include:

- 21st Century Cures Act (2016): Requires healthcare organizations to provide open access to data, including provider directories, through standardized APIs (FHIR), supporting interoperability and patient access to information.
- CMS Interoperability and Patient Access Final Rule (2020): Mandates Medicaid and CHIP plans to offer publicly accessible, FHIR-compliant provider directories via APIs to improve care coordination and empower patients.
- California Assembly Bill 205 (AB 205): Requires Medi-Cal managed care plans to maintain accurate online provider directories and make the information publicly accessible through APIs.
- CalAIM Initiative: California's Medicaid reform mandates accurate, API-based provider directories to enhance system integration and patient access to care.
- HITECH Act (2009): Promotes secure exchange of health information, influencing the development of modern healthcare data systems, including provider directories.

3. Technical Details

3.1 API Overview

The Provider Directory API is a RESTful web service that facilitates data exchange in JSON format. It uses standard FHIR resources, as defined by HL7, to represent healthcare provider information. The API follows the REST (Representational State Transfer) architectural style, meaning it uses standard HTTP methods—primarily **GET**—to retrieve data. JSON (JavaScript Object Notation) is used to structure and transmit the data, providing an efficient way for systems to communicate and share information.

- Base URL: <https://hidex.dmh.lacounty.gov/Provider/>
- FHIR Version: v4.0.1
- Access: Anonymous (no authentication required)
- Content Type: application/fhir+json

The API supports standard FHIR resources related to the provider directory, primarily focusing on the following:

- Practitioner – Represents an individual healthcare provider.
- Organization – Represents a healthcare organization or facility.
- Location – Represents physical locations where services are provided.
- HealthcareService – Details specific services offered at a location.
- PractitionerRole – Links practitioners to their roles within organizations and locations.

The following section covers the following topics:

- API syntax, function names, required and optional parameters supported and their data types, return variables and their types/structures, exceptions and exception handling methods, and their returns.
- The software components and configurations an application shall use to successfully interact with the API and process its response(s).
- All applicable technical requirements and attributes that are necessary for an application to be registered with any authorization server(s) deployed in conjunction with the API

3.2 Key FHIR Resources

The following REST methods have been implemented using the respective FHIR resource profiles through the LACDMH Provider Directory API. Each URL will show the API syntax, function names, required and optional parameters supported and their data types, return variables and their types/structures as per HL7 FHIR standard:

| FHIR API REST Method | Based On | Resource Definition URL |
|----------------------|------------------------|---|
| HealthcareService | HealthcareService (R4) | http://hl7.org/fhir/R4/healthcareservice.html |
| Location | Location (US Core) | http://hl7.org/fhir/us/core/STU3.1.1/StructureDefinition-us-core-location.html |
| Organization | Organization (US Core) | http://hl7.org/fhir/us/core/STU3.1.1/StructureDefinition-us-core-organization.html |
| Practitioner | Practitioner (US Core) | http://hl7.org/fhir/us/core/STU3.1.1/StructureDefinition-us-core-practitioner.html |
| PractitionerRole | PractitionerRole (R4) | http://hl7.org/fhir/R4/practitionerrole.html |

3.2.1 HealthcareService

The HealthcareService resource provides details about the healthcare services offered by an organization at a specific location.

Data Mapping

| | |
|--|--|
| <i>Name of medical group/foundation, any group affiliation</i> | <i>HealthcareService.providedBy.reference</i> |
| <i>Name of medical group/foundation, any group affiliation</i> | <i>HealthcareService.providedBy.display</i> |
| <i>Services and benefits available: AgeGroupServed</i> | <i>HealthcareService.category.coding.system</i> |
| <i>Services and benefits available: AgeGroupServed</i> | <i>HealthcareService.category.coding.code</i> |
| <i>Services and benefits available: AgeGroupServed</i> | <i>HealthcareService.category.coding.display</i> |
| <i>Services and benefits available: AgeGroupServed</i> | <i>HealthcareService.category.text</i> |
| <i>Services and benefits available: TypeOfService</i> | <i>HealthcareService.type.coding.code</i> |
| <i>Services and benefits available: TypeOfService</i> | <i>HealthcareService.type.coding.display</i> |

| | |
|--|--|
| Services and benefits available: TypeOfService | HealthcareService.type.text |
| Services and benefits available: TypeOfService | HealthcareService.type.coding.system |
| Specialty, as applicable: DSM Practice Focus | HealthcareService.specialty.coding.system |
| Specialty, as applicable: DSM Practice Focus | HealthcareService.specialty.coding.code |
| Specialty, as applicable: DSM Practice Focus | HealthcareService.specialty.coding.display |
| Services and benefits available:PROGRAMS SERVED | HealthcareService.program.coding.system |
| Services and benefits available:PROGRAMS SERVED | HealthcareService.program.coding.code |
| Services and benefits available:PROGRAMS SERVED | HealthcareService.program.coding.display |
| Name of site | HealthcareService.location.reference |
| Services and benefits available:SERVICE ACCESSIBLE BY PHONE/WALK-IN/BY APPOINTMENT | HealthcareService.appointmentRequired |
| Services and benefits available:SERVICE ACCESSIBLE BY REFERRAL ONLY | HealthcareService.extension.url |
| Services and benefits available:SERVICE ACCESSIBLE BY REFERRAL ONLY | HealthcareService.extension.valueString |

Use Cases

| Use Case # | Description | LACDMH FHIR Service Method & Search Query |
|------------|---|--|
| 1 | User wants to check if a program supported by the HealthcareService | Search Query String: GET [base]/ HealthcareService? program=[string] Example: GET [base]/ HealthcareService? program= AB109 |
| 2 | User wants to find out the type of service provided by a healthcare service | Search Query String: GET [base]/ HealthcareService? type=[string] Example: GET [base]/ HealthcareService? type= Crisis Residential Treatment Services |

Sample Payload

```

{
  "resourceType": "HealthcareService",
  "id": "<fhir_instance_id>",
  "meta":
  {
    "lastUpdated": "nact_lastupdated"
  },
  "providedBy": {
    "reference": "Organization/12345",
    "display": "Example Provider Inc."
  },
  "category": [
    {
      "coding": [
        {
          "system": "http://terminology.hl7.org/CodeSystem/service-category",
          "code": "22",
          "display": "Mental Health"
        }
      ],
      "text": "Site Serves Children and Adults"
    }
  ],
  "type": [
    {
      "coding": [
        {
          "system": "http://terminology.hl7.org/CodeSystem/service-type",
          "code": "4",
          "display": "Aged Residential Care"
        }
      ],
      "text": "Adult Residential Treatment Services"
    },
    {
      "coding": [
        {
          "system": "http://terminology.hl7.org/CodeSystem/service-type",
          "code": "",
          "display": "Crisis - Mental Health"
        }
      ],
      "text": "Crisis Residential Treatment Services"
    }
  ]
}

```



```

    }
  ],
  "specialty": [
    {
      "coding": [
        {
          "system": "http://snomed.info/sct",
          "code": "33449004",
          "display": "Personality disorder"
        }
      ],
      "text": "Personality Disorders"
    }
  ],
  "location": [
    {
      "reference": "Location/1908",
      "display": "WEST EXAMPLE MENTAL HEALTH SERVICES"
    }
  ],
  "program": {
    "coding": [
      {
        "system": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/Program",
        "code": "PEI",
        "display": "Prevention & Early Intervention (PEI)"
      }, {
        "system": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/Program",
        "code": "AB109",
        "display": "AB109"
      }
    ]
  },
  "appointmentRequired": false,
  "extension": [
    {
      "url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/referralRequired",
      "valueString": "Yes"
    }
  ]
}

```

3.2.2 Location

The Location resource provides details about the physical locations of organizations or practitioners, such as offices or clinics.

Data Mapping

| | |
|--|---|
| <i>Services and benefits available: language supported</i> | <i>Location.extension.url</i> |
| <i>Services and benefits available: language supported</i> | <i>Location.extension.valueCodeableConcept.coding.system</i> |
| <i>Services and benefits available: language supported</i> | <i>Location.extension.valueCodeableConcept.coding.code</i> |
| <i>Services and benefits available: language supported</i> | <i>Location.extension.valueCodeableConcept.coding.display</i> |
| <i>Services and benefits available: language supported</i> | <i>Location.extension.valueCodeableConcept.text</i> |
| <i>Specialty: WHAT SPECIAL POPULATION SITE SERVES</i> | <i>Location.extension.url</i> |
| <i>Specialty: WHAT SPECIAL POPULATION SITE SERVES</i> | <i>Location.extension.valueString</i> |
| <i>Name of site/independent physician/provider associations</i> | <i>Location.name</i> |
| <i>All telephone numbers associated with the practice site;</i> | <i>Location.telecom.system</i> |
| <i>All telephone numbers associated with the practice site;</i> | <i>Location.telecom.value</i> |
| <i>All telephone numbers associated with the practice site;</i> | <i>Location.telecom.use</i> |
| <i>Website URL for each service location or physician provider, as appropriate</i> | <i>Location.telecom.system</i> |
| <i>Website URL for each service location or physician provider, as appropriate</i> | <i>Location.telecom.value</i> |
| <i>Website URL for each service location or physician provider, as appropriate</i> | <i>Location.telecom.use</i> |
| <i>Telephone number to call the 24/7 access line</i> | <i>Location.telecom.system</i> |
| <i>Telephone number to call the 24/7 access line</i> | <i>Location.telecom.value</i> |
| <i>Telephone number to call the 24/7 access line</i> | <i>Location.telecom.use</i> |
| <i>accommodations for people with physical disabilities</i> | <i>Location.telecom.system</i> |
| <i>accommodations for people with physical disabilities</i> | <i>Location.telecom.value</i> |
| <i>accommodations for people with physical disabilities</i> | <i>Location.telecom.use</i> |

| | |
|--|--|
| <i>A skilled medical interpreter at the provider's office</i> | <i>Location.telecom.system</i> |
| <i>A skilled medical interpreter at the provider's office</i> | <i>Location.telecom.value</i> |
| <i>A skilled medical interpreter at the provider's office</i> | <i>Location.telecom.use</i> |
| <i>Street address(es)</i> | <i>Location.address.use</i> |
| <i>Street address(es)</i> | <i>Location.address.type</i> |
| <i>Street address(es)</i> | <i>Location.address.line</i> |
| <i>Street address(es)</i> | <i>Location.address.city</i> |
| <i>Street address(es)</i> | <i>Location.address.state</i> |
| <i>Street address(es)</i> | <i>Location.address.postalcode</i> |
| <i>accommodations for people with physical disabilities</i> | <i>Location.physicalType.coding.system</i> |
| <i>accommodations for people with physical disabilities</i> | <i>Location.physicalType.coding.code</i> |
| <i>accommodations for people with physical disabilities</i> | <i>Location.physicalType.coding.display</i> |
| <i>accommodations for people with physical disabilities</i> | <i>Location.physicalType.text</i> |
| <i>Name of medical group/foundation, any group affiliation</i> | <i>Location.managingOrganization.reference</i> |
| <i>Hours and days when each service location is open, including the availability of evening and/or weekend hours</i> | <i>Location.hoursOfOperation.daysOfWeek</i> |
| <i>Hours and days when each service location is open, including the availability of evening and/or weekend hours</i> | <i>Location.hoursOfOperation.openingTime</i> |
| <i>Hours and days when each service location is open, including the availability of evening and/or weekend hours</i> | <i>Location.hoursOfOperation.closingTime</i> |

Use Cases

| Use Case # | Description | LACDMH FHIR Service Method & Search Query |
|------------|---|---|
| 1 | User wants to search by location name | Search Query String: GET [base]/ Location? name=[string] Example: GET [base]/ Location?name=Pacific Clinics Long Beach |
| 2 | User wants to search by adding part of location address | Search Query String: GET [base]/ Location? address=[string] |

| Use Case # | Description | LACDMH FHIR Service Method & Search Query |
|------------|--|---|
| | | Example: GET [base]/ Location?address=Atlantic Ave |
| 3 | User wants to search for all locations by city | Search Query String: GET [base]/ Location? city=[string] Example: GET [base]/ Location?city=Pasadena |
| 4 | Users wants to search for all locations by a particular zip code | Search Query String: GET [base]/ Location? zip=[string] Example: GET [base]/ Location?zip=91406 |
| 5 | User wants to get all locations for an organization | Search Query String: GET [base]/ Location? OrganizationName=[string] Example: GET [base]/ Location? OrganizationName=United Clincs |

Sample Payload

```
{
  "resourceType": "Location",
  "id": "<fhir_instance_id>",
  "meta": {
    "profile": [
      "http://hl7.org/fhir/us/core/StructureDefinition/us-core-location"
    ],
    "lastUpdated": "<tbl_Sites_ProviderDirectory_column_nact_lastupdated>"
  },
  "extension": [
    {
      "url": "https://fhir.dmh.lacounty.gov/v4/Terminology/languageSpokenAtLocation",
      "valueCodeableConcept": {
        "coding": [
          {
            "system": "https://iso639-3.sil.org",
            "code": "eng",
            "display": "English"
          },
          {
            "system": "https://iso639-3.sil.org",

```

```

        "code": "spa",
        "display": "Spanish"
    }
],
    "text": "Language(s) supported at location"
}
},
{
    "url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/SpecialPopulationServed",
    "valueString": "Gender Identity; Homeless/Housing"
}
],
"identifier" : [
{
    "use" : "official",
    "system" : "DMH.DW.HCPDFhirApi.Sites_ProviderDirectory",
    "value" : "1234"
}
],

"status" : "active",
"name" : "An Example Clinic - Some City",
"mode" : "instance",
"type": [
{
    "coding": [
        {
            "system": "http://terminology.hl7.org/CodeSystem/v3-RoleCode",
            "code": "RHU",
            "display": "Rehabilitation hospital unit"
        }
    ]
}
]
},
],
"telecom" :
[
{
    "system" : "phone",
    "value" : "111-222-3333",
    "use" : "work"
},
{
    "system" : "url",
    "value" : "http://exampleclinic.com/somecitylocation",
    "use" : "work"
},
],

```

```

{
  "system" : "phone",
  "value" : "24/7 ACCESS Center Hotline at 1-800-854-7771. (For TDD-TTY, call 711)",
  "use" : "work"
},
{
  "system" : "phone",
  "value" : "Language translation line available",
  "use" : "work"
},
{
  "system" : "other",
  "value" : "TDD (Telecommunication Device for the Deaf) and TTY (Teletypewriter) available",
  "use" : "work"
}
],
"address" : {
  "use" : "work",
  "type" : "physical",
  "line" : ["123 Some Ave, Suite 33"],
  "city" : "Some City",
  "state" : "CA",
  "postalCode" : "12345-6789"
},
"physicalType" : {
  "coding" : [
    {
      "system" : "http://terminology.hl7.org/CodeSystem/location-physical-type",
      "code" : "bu",
      "display" : "Building"
    }
  ]
},
"text" : "Location is ADA compliant"
},
"managingOrganization" : {
  "reference" : "Organization/00123"
},
"hoursOfOperation" : [
  {
    "daysOfWeek" : ["mon"],
    "openingTime" : "08:00:00",
    "closingTime" : "17:00:00"
  }
],
{

```

```
"daysOfWeek": ["tue"],  
"openingTime": "08:00:00",  
"closingTime": "17:00:00"  
},  
{  
"daysOfWeek": ["wed"],  
"openingTime": "08:00:00",  
"closingTime": "17:00:00"  
},  
{  
"daysOfWeek": ["thu"],  
"openingTime": "08:00:00",  
"closingTime": "17:00:00"  
},  
{  
"daysOfWeek": ["fri"],  
"openingTime": "08:00:00",  
"closingTime": "17:00:00"  
},  
{  
"daysOfWeek": ["sat"],  
"openingTime": "09:00:00",  
"closingTime": "13:00:00"  
}  
]  
}
```

3.2.3 Organization

The Organization resource provides information about healthcare organizations, such as hospitals, clinics, or provider groups.

Data Mapping

| | |
|---|---|
| <i>ORGANIZATION TYPE (Directly Operated/ Legal Entity/ FFS)</i> | <i>Organization.type.coding.code</i> |
| <i>ORGANIZATION TYPE (Directly Operated/ Legal Entity/ FFS)</i> | <i>Organization.type.coding.display</i> |
| <i>ORGANIZATION TYPE (Directly Operated/ Legal Entity/ FFS)</i> | <i>Organization.type.coding.system</i> |
| <i>Name of medical group/foundation, any group affiliation</i> | <i>Organization.name</i> |
| <i>SERVICE AREA</i> | <i>Organization.description</i> |

Use Cases

| Use Case # | Description | LACDMH FHIR Service Method & Search Query |
|------------|---|---|
| 1 | User wants to search for an organization by name | Method: GetOrganization Search Query String: <code>GET [base]/ Organization? name=[string]</code> Example: <code>GET [base]/ Organization?name=Pacific</code> |
| 2 | User wants to search for an organization by address | Method: GetOrganization Search Query String: <code>GET [base]/ Organization? address=[string]</code> Example: <code>GET [base]/ Organization?address=Vineland Blvd</code> |

Sample Payload

```
{
  "resourceType": "Organization",
  "id": "<fhir_instance_id>",
  "meta": {
    "lastUpdated": "<data_source_last_load_date>"
  },
  "identifier": [
    {
      "use": "official",
      "system": "https://www.dhcs.ca.gov/",
      "value": "00123"
    },
    {
      "use": "official",
      "system": "DMH.DW.HCPD274.Group_Import",
      "value": "E65D7FEA-074E-47E3-A6E2-FA31753065D2"
    }
  ],
  "active": true,
  "type": [{
    "coding": [ {
      "system": "http://terminology.hl7.org/CodeSystem/organization-type",
      "code": "prov",
      "display": "Healthcare Provider"
    } ]
  }],
  "name": "EXAMPLE PROVIDER INC",
  "description": "Service Area 2"
}
```

3.2.4 Practitioner

The **Practitioner** resource is used to retrieve information about individual healthcare providers. This includes names, contact details, and qualifications.

Data Mapping

| | |
|--|---|
| <i>Specialty, as applicable: DSM Practice Focus</i> | <i>Practitioner.extension.url</i> |
| <i>Specialty, as applicable: DSM Practice Focus</i> | <i>Practitioner.extension.valueCoding.system</i> |
| <i>Specialty, as applicable: DSM Practice Focus</i> | <i>Practitioner.extension.valueCoding.code</i> |
| <i>Specialty, as applicable: DSM Practice Focus</i> | <i>Practitioner.extension.valueCoding.display</i> |
| <i>Services and benefits available: Does provider travel to beneficiaries</i> | <i>Practitioner.extension.url</i> |
| <i>Services and benefits available: Does provider travel to beneficiaries</i> | <i>Practitioner.extension.valueString</i> |
| <i>Services and benefits available: Distance provider willing to travel to go to beneficiaries</i> | <i>Practitioner.extension.url</i> |
| <i>Services and benefits available: Distance provider willing to travel to go to beneficiaries</i> | <i>Practitioner.extension.valueString</i> |
| <i>Specialty, as applicable: Area of expertise</i> | <i>Practitioner.extension.url</i> |
| <i>Specialty, as applicable: Area of expertise</i> | <i>Practitioner.extension.valueString</i> |
| <i>Whether the provider will accept new beneficiaries</i> | <i>Practitioner.extension.url</i> |
| <i>Whether the provider will accept new beneficiaries</i> | <i>Practitioner.extension.valueString</i> |
| <i>Services and benefits available: If provider serves special population</i> | <i>Practitioner.extension.url</i> |
| <i>Services and benefits available: If provider serves special population</i> | <i>Practitioner.extension.valueString</i> |
| <i>Services and benefits available: If provider is a telehealth practitioner</i> | <i>Practitioner.extension.url</i> |
| <i>Services and benefits available: If provider is a telehealth practitioner</i> | <i>Practitioner.extension.valueString</i> |
| <i>National Provider Identifier number</i> | <i>Practitioner.identifier.type.coding.system</i> |
| <i>National Provider Identifier number</i> | <i>Practitioner.identifier.type.coding.code</i> |
| <i>National Provider Identifier number</i> | <i>Practitioner.identifier.system</i> |
| <i>National Provider Identifier number</i> | <i>Practitioner.identifier.value</i> |
| <i>Name of provider</i> | <i>Practitioner.name.family</i> |
| <i>Name of provider</i> | <i>Practitioner.name.given</i> |

| | |
|--|---|
| <i>Specialty, as applicable: Provider's professional license</i> | <i>Practitioner.qualification.identifier.use</i> |
| <i>Specialty, as applicable: Provider's professional license</i> | <i>Practitioner.qualification.identifier.value</i> |
| <i>Specialty, as applicable: Provider's discipline</i> | <i>Practitioner.qualification.code.coding.system</i> |
| <i>Specialty, as applicable: Provider's discipline</i> | <i>Practitioner.qualification.code.coding.code</i> |
| <i>Specialty, as applicable: Provider's discipline</i> | <i>Practitioner.qualification.code.coding.display</i> |
| <i>Specialty, as applicable: Provider's DEA license</i> | <i>Practitioner.qualification.identifier.use</i> |
| <i>Specialty, as applicable: Provider's DEA license</i> | <i>Practitioner.qualification.identifier.value</i> |
| <i>Specialty, as applicable: Provider's DEA license</i> | <i>Practitioner.qualification.code.coding.system</i> |
| <i>Specialty, as applicable: Provider's DEA license</i> | <i>Practitioner.qualification.code.coding.code</i> |
| <i>Specialty, as applicable: Provider's DEA license</i> | <i>Practitioner.qualification.code.coding.display</i> |
| <i>Provider completed cultural competence training</i> | <i>Practitioner.qualification.code.coding.system</i> |
| <i>Provider completed cultural competence training</i> | <i>Practitioner.qualification.code.coding.code</i> |
| <i>Provider completed cultural competence training</i> | <i>Practitioner.qualification.code.coding.display</i> |
| <i>Provider completed cultural competence training</i> | <i>Practitioner.qualification.code.text</i> |
| <i>Cultural and linguistic capabilities</i> | <i>Practitioner.communication.language.coding.system</i> |
| <i>Cultural and linguistic capabilities</i> | <i>Practitioner.communication.language.coding.code</i> |
| <i>Cultural and linguistic capabilities</i> | <i>Practitioner.communication.language.coding.display</i> |

Use Cases

| Use Case # | Description | LACDMH FHIR Service Method & Search Query |
|------------|--|--|
| 1 | User wants to search for a healthcare provider of LACDMH by name | Method: GetPractitioner Search Query String: <code>GET [base]/Practitioner?name=[string]</code> Example: <code>GET [base]/Practitioner?name=Smith</code> |
| 2 | User wants to search for a healthcare provider of LACDMH | Method: GetPractitioner |

| Use Case # | Description | LACDMH FHIR Service Method & Search Query |
|------------|--|--|
| | by NPI (National Provider Identifier) | Search Query String: GET [base]/Practitioner?name=[string] Example: GET [base]/Practitioner? npi=1112223334 |
| 3 | User wants to get the list of all practitioners working in a particular location (clinic/site) | Method: GetPractitioner Search Query String: GET [base]/Practitioner?LocationName=[string] Example: GET [base]/Practitioner? LocationName=Pacific Clinic Long Beach |

Sample Payload

```
{
  "resourceType": "Practitioner",
  "id": "<fhir_instance_id>",
  "meta": {
    "profile": ["http://hl7.org/fhir/us/core/StructureDefinition/us-core-practitioner"],
    "lastUpdated": "2024-01-01"
  },
  "extension": [
    {
      "url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/DSM5PracticeFocus",
      "valueCoding": {
        "system": "DMH.DW.HCPDFhirApi.Providers_ProviderDirectory",
        "code": "DS",
        "display": "Depressive Disorders"
      }
    },
    {
      "url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/DSM5PracticeFocus",
      "valueCoding": {
        "system": "DMH.DW.HCPDFhirApi.Providers_ProviderDirectory",
        "code": "BP",
        "display": "Bi-polar Disorders"
      }
    }
  ],
}
```

```

"url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/DSM5PracticeFocus",
"valueCoding":
{
  "system": "DMH.DW.HCPDFhirApi.Providers_ProviderDirectory",
  "code": "MD",
  "display": "Mood Disorders"
}
},
{
"url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/providerTravelToBeneficiaries",
"valueString": "Yes"
},
{
"url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/distanceProviderWillingToTravel",
"valueString": "10"
},
{
"url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/providerAreaOfExpertise",
"valueString": "Child/Adolescent"
},
{
"url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/providerAreaOfExpertise",
"valueString": "Adult"
},
{
"url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/acceptNewBeneficiaries",
"valueString": "No"
},
{
"url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/practitionerServeSpecialPopulation",
"valueString": "Yes"
},
{
"url": "http://fhir.dmh.lacounty.gov/fhir/StructureDefinition/telehealthPractitioner",
"valueString": "Yes"
}
],
"identifier": [
{
  "use": "official",
  "system": "DMH.DW.HCPDFhirApi.Providers_ProviderDirectory",
  "value": "2CB521E7-119E-49FD-B5EC-6F0EBDEDFB0F"
},
{
"type": {

```

```

    "coding" : [{
      "system" : "http://terminology.hl7.org/CodeSystem/v2-0203",
      "code" : "NPI"
    }
  ],
  "system" : "http://hl7.org/fhir/sid/us-npi",
  "value" : "1122334499"
}
],
"active" : true,
"name" : [{
  "family" : "Careful",
  "given" : ["Adam"]
}],

"qualification" :
[
  {
    "identifier" :
    [
      {
        "use" : "official",
        "value" : "RN112233"
      }
    ],
    "code" :
    {
      "coding" : [{
        "system" : "http://terminology.hl7.org/CodeSystem/v2-0203",
        "code" : "RN",
        "display" : "Registered Nurse Number"
      }
    ]
    }
  },
  {
    "identifier" :
    [
      {
        "use" : "official",
        "value" : "F91234567-001AB"
      }
    ],
    "code" :
    {
      "coding" : [{
        "system" : "http://terminology.hl7.org/CodeSystem/v2-0203",
        "code" : "DEA",
        "display" : "Drug Enforcement Administration registration number"
      }
    ]
  }
}
]

```

```
}
},
{
  "code" : {
    "coding" : [{
      "system" : "http://terminology.hl7.org/ValueSet/v2-0360",
      "code" : "CER",
      "display" : "Certificate"
    }],
    "text" : "Cultural Competency Training Certificate"
  }
},
],
"communication" : [{
  "language" : {
    "coding" : [{
      "system" : "https://iso639-3.sil.org",
      "code" : "kor",
      "display" : "Korean"
    }],
  },
  "coding" : [{
    "system" : "https://iso639-3.sil.org",
    "code" : "ase",
    "display" : "American Sign Language (ASL)"
  }],
}
]
```

3.2.4 PractitionerRole

The **PractitionerRole** resource links practitioners to their roles, organizations, and locations.

Data Mapping

| | |
|-------------------------------------|--|
| National Provider Identifier number | PractitionerRole.identifier.system |
| National Provider Identifier number | PractitionerRole.identifier.value |
| National Provider Identifier number | PractitionerRole.practitioner.reference |
| Name of provider | PractitionerRole.practitioner.display |
| Name of group | PractitionerRole.organization.reference |
| Specialty, as applicable | PractitionerRole.specialty.coding.system |
| Specialty, as applicable | PractitionerRole.specialty.coding.code |
| Specialty, as applicable | PractitionerRole.specialty.coding.display |
| Name of site | PractitionerRole.location.reference |
| Name of site | PractitionerRole.location.display |
| Services and benefits available | PractitionerRole.healthcareService.reference |

Use Cases

| Use Case # | Description | LACDMH FHIR Service Method & Search Query |
|------------|---|--|
| 1 | User wants to see what programs, specialty a LACDMH healthcare provider provides by entering their NPI (National Provider Identifier) | Method: GetPractitionerRole Search Query String: <code>GET [base]/PractitionerRole?npi=[string]</code> Example: <code>GET [base]/PractitionerRole? npi=1112223334</code> |
| 2 | User wants to verify if a practitioner has certain specialty at an organization | Method: GetPractitionerRole Search Query String: <code>GET [base]/PractitionerRole? specialty=[string]</code> Example: <code>GET [base]/PractitionerRole? specialty= Psychologist</code> |

Sample Payload

```

{
  "resourceType": "PractitionerRole",
  "id": "<fhir_instance_id>",
  "meta": {
    "lastUpdated": "<data_source_last_load_date>"
  },
  "identifier": [
    {
      "system": "http://hl7.org/fhir/sid/us-npi",
      "value": "1122334499"
    }
  ],
  "practitioner": {
    "reference": "Practitioner/1122334499",
    "display": "Adam Careful"
  },
  "organization": {
    "reference": "Organization/00123"
  },
  "specialty": [
    {
      "coding": [
        {
          "system": "2.16.840.1.113883.6.101",
          "code": "103T00000X",
          "display": "Behavioral Health & Social Service Providers; Psychologist"
        }
      ]
    }
  ],
  "location": [
    {
      "reference": "Location/1112223334",
      "display": "South Example Clinic"
    }
  ],
  "healthcareService": [
    {
      "reference": "HealthcareService/<program_name>"
    }
  ]
}

```

```
}  
]  
}
```

3.3 Search Parameters

The Provider Directory API supports standard FHIR search parameters. The following are common search parameters for each resource:

- Practitioner: name, identifier, family, given
- Organization: name, identifier, address, type
- Location: name, identifier, address, organization
- HealthcareService: organization, location, type
- PractitionerRole: practitioner, organization, location, healthcareService

Refer to the FHIR Search API (<https://www.hl7.org/fhir/R4/search.html>) for additional details on search parameters and operations.

3.4 Exception Handling

Errors will be returned as OperationOutcome resources as per the FHIR standard. Typical HTTP status codes used by the API are:

- 200 OK: Successful request.
- 400 Bad Request: Invalid request, typically due to incorrect query parameters.
- 404 Not Found: No matching resources found.
- 500 Internal Server Error: Unexpected error occurred on the server.

Example error response:

```
{
  "resourceType": "OperationOutcome",
  "issue": [
    {
      "severity": "error",
      "code": "invalid",
      "details": {
        "text": "Invalid query parameter 'unknown'"
      }
    }
  ]
}
```

3.5 Paging and Filtering

Results returned by the Provider Directory API can be paginated. The Bundle resource will contain a link element with next and previous URLs to facilitate paging.

To limit the number of results returned, use the `_count` parameter. For example:

```
GET /Practitioner?_count=10
```

3.6 Rate Limits

The Provider Directory API may implement rate limiting to ensure fair usage and avoid abuse. If a rate limit is exceeded, an HTTP 429 Too Many Requests status will be returned along with the `Retry-After` header indicating when the client can retry the request.