

# Developer Documentation

Learn how to describe what providers and drugs are covered by a particular health plan.

## JSON

All information must be described in the JSON file format. JSON is a lightweight and simple way to represent machine-readable data. It is quickly becoming the de facto standard for shuttling data across the internet, fueled primarily by the rise of mobile and APIs. Modern programming languages can interpret and produce JSON out of the box.

[Learn about JSON >](#)

## Public Discoverability

Organizations must post their `index.json`, `plans.json`, `providers.json`, and `drugs.json` files on a website, accessible to the public.

The JSON URLs listed above *must* be provided over HTTPS to ensure the integrity of the data.

## Data types

All values in the JSON are strings, unless otherwise noted in the `Definition` field.

Dates should be strings, in ISO 8601 format (e.g. YYYY-MM-DD).

## Health Plans - `plans.json`

### Description

`plans.json` contains a list of health plans and their corresponding network of providers and formularies.

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### Schema

Field	Label	Definition	Required
<b>plan_id_type</b>	ID Type	Type of Plan ID. For all Marketplace plans this should be: HIOS-PLAN-ID	Yes
<b>plan_id</b>	Unique Identifier	The 14-character, HIOS-generated Plan ID number. (Plan IDs must be unique, even across different markets.)	Yes
<b>marketing_name</b>	Marketing Name	The name of the plan as it is displayed on HealthCare.gov	Yes
<b>summary_url</b>	URL for Plan Information	The URL that goes directly to the summary of benefits and coverage for the specific standard plan or plan variation.	Yes
<b>marketing_url</b>	URL for Plan Information	The URL that goes directly to the plan brochure for the specific standard plan or plan variation.	Yes
<b>formulary_url</b>	URL for Formulary	The URL that goes directly to the formulary brochure for the specific standard plan or plan variation.	No
<b>plan_contact</b>	Contact Email Address for Plan	An email address for developers/public to report mistakes in the network and formulary data.	Yes

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Field	Label	Definition	Required
<b>network</b>	Network	Array of networks	Yes
<b>formulary</b>	Formulary	The formulary associated with this plan.	Yes
<b>benefits</b>	Benefits	Array of benefits	No
<b>last_updated_on</b>	Last Updated On	ISO 8601 format (e.g. YYYY-MM-DD)	Yes

### Network sub-type

This type defines a network within a plan. The values should be something that is meaningful to an issuer, there is no taxonomy of network tier names. This value will be used later in the `providers.json` file to connect a provider to a specific plan and network tier within that plan.

Field	Label	Definition	Required
<b><i>network_tier</i></b>	Network Tier	Tier name for network (Example Values: PREFERRED, NON- PREFERRED, etc. Values should be all uppercase. )	Yes

### Formulary sub-type

This type defines a formulary within a plan. The values should be something that is meaningful to an issuer, there is no taxonomy of formulary tier names. This value will be used later in the `drugs.json` file to connect a drug to a specific plan and formulary tier within that plan.

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Field	Label	Definition	Required
<i>drug_tier</i>	Drug Tier	Tier for formulary - (Example Values: GENERIC, PREFERRED- GENERIC, NON-PREFERRED- GENERIC, SPECIALTY, BRAND, PREFERRED-BRAND, NON-PREFERRED-BRAND, ZERO-COST-SHARE- PREVENTIVE, MEDICAL - SERVICE, etc. Values should be all uppercase.)	Yes
<i>mail_order</i>	Mail Order	Does the formulary cover mail order? - (Values: true or false)	Yes
<i>cost_sharing</i>	Cost Sharing	Array of cost sharing values (see "Cost sharing sub-type" below)	No

### Cost sharing sub-type

Field	Label	Definition	Required
<i>pharmacy_type</i>	Pharmacy Type	Pharmacy type (Example Values: 1-MONTH-IN- RETAIL, 1-MONTH-OUT- RETAIL, 1-MONTH-IN-MAIL, 1-MONTH-OUT-MAIL, 3- MONTH-IN-RETAIL, 3- MONTH-OUT-RETAIL, 3-	Yes

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Field	Label	Definition	Required
		MONTH-IN-MAIL, 3-MONTH-OUT-MAIL)	
<b>copay_amount</b>	Copay amount	Amount of copay, in \$ (number)	Yes
<b>copay_opt</b>	Copay option	Qualifier of copay amount (Values: AFTER-DEDUCTIBLE, BEFORE-DEDUCTIBLE, NO-CHARGE, NO-CHARGE-AFTER-DEDUCTIBLE)	Yes
<b>coinsurance_rate</b>	Coinsurance rate	Rate of coinsurance (float, 0.0 to 1.0)	Yes
<b>coinsurance_opt</b>	Coinsurance option	Qualifier for coinsurance rate (Values: AFTER-DEDUCTIBLE, NO-CHARGE, NO-CHARGE-AFTER-DEDUCTIBLE)	Yes

### **Benefits sub-type**

The **Benefits** sub-type is an optional section and will be shaped depending on what industry and consumers find valuable.

For example, many health plans are offering telemedicine as an additional health benefit and that can be highlighted by adding a telemedicine entry.

## Appendix A

Field	Label	Definition	Required
telemedicine	Offers Telemedicine	Does the plan cover telemedicine? Boolean (values should be either true or false)	No

### Example

```
[
  {
    "plan_id_type": "HIOS-PLAN-ID",
    "plan_id": "12345XX9876543",
    "marketing_name": "Sample Gold Health Plan",
    "summary_url": "http://url/to/summary/benefits/coverage",
    "marketing_url": "http://url/to/health/plan/information",
    "formulary_url": "http://url/to/formulary/information",
    "plan_contact": "email@address.com",
    "network": [
      {
        "network_tier": "PREFERRED"
      },
      {
        "network_tier": "NON-PREFERRED"
      }
    ],
    "formulary": {
      "drug_tier": "BASIC",
      "mail_order": true,
      "cost_sharing": [
        {
          "pharmacy_type": "1-MONTH-IN-RETAIL",
          "copay_amount": 20.0,
          "copay_opt": "AFTER-DEDUCTIBLE",
          "coinsurance_rate": 0.10,
          "coinsurance_opt": "BEFORE-DEDUCTIBLE"
        }
      ]
    }
  }
]
```

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```
    },  
    {  
      "pharmacy_type": "1-MONTH-IN-MAIL",  
      "copay_amount": 0.0,  
      "copay_opt": "NO-CHARGE",  
      "coinsurance_rate": 0.20,  
      "coinsurance_opt": null  
    }  
  ]  
},  
"last_updated_on": "2015-03-17"  
}  
]
```

## Providers - providers.json

### Description

providers.json contains a list of providers and the plans that cover their services.

If a provider has more than one NPI number, please create separate entries for each NPI number. If there is no NPI number, set the value to null ({"npi": null})

### Schema

Field	Label	Definition	Required
npi	National Provider ID	The 10-digit National Provider Identifier (NPI) is a unique identification number for covered health care providers	Yes

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Field	Label	Definition	Required
<b>type</b>	Type	Specify if INDIVIDUAL or FACILITY	Yes
<b>plans</b>	Plans	Array of plans that cover this provider (see "Plans sub-type" below)	Yes
<b>last_updated_on</b>	Last Updated On	Date of when the record for this provider has been last updated or refreshed - ISO 8601 format (e.g. YYYY-MM-DD)	Yes

If the entry is for an INDIVIDUAL then the following fields should be present:

Field	Label	Definition	Required
<b>name</b>	Name	-	Yes
<b>prefix</b>	Prefix	One of Mr., Mrs., Miss, Ms., Dr.	No
<b>first</b>	First Name	Full first name	Yes
<b>middle</b>	Middle Name	Full middle name	No
<b>last</b>	Last Name	Full last name	Yes
<b>suffix</b>	Suffix	One of Jr., Sr., II, III, III, IV	No

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Field	Label	Definition	Required
<b>addresses</b>	Address	List of addresses for this provider	Yes
<b>address</b>	Street Address	-	Yes
<b>address_2</b>	Street Address 2	-	No
<b>city</b>	City	-	Yes
<b>state</b>	State Abbreviation	Two letter state abbreviation (FL, IA, etc.)	Yes
<b>zip</b>	Zip Code	Five digit zip code, represented as a string	Yes
<b>phone</b>	Phone Number	Phone number for this address, represented as a string of numbers	Yes
<b>speciality</b>	Specialty Type	An array of speciality types. Free form text field.	Yes
<b>accepting</b>	Accepting Patients	Is the provider accepting new patients? One of three values: accepting, not accepting, accepting in some locations	Yes
<b>gender</b>	Gender	Values: Male, Female, Other	No
<b>languages</b>	Languages Spoken	An array of the languages spoken	Yes

If the entry is for a FACILITY then the following fields should be present:

Field	Label	Definition	Required
<b>facility_name</b>	Facility Name	-	Yes

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<b>Field</b>	<b>Label</b>	<b>Definition</b>	<b>Required</b>
<b>facility_type</b>	Facility Type	An array of facility types. Free-form text field.	Yes
<b>addresses</b>	Address	List of addresses for this facility (Limit 1)	Yes
<b>address</b>	Street Address	-	Yes
<b>address_2</b>	Street Address 2	-	No
<b>city</b>	City	-	Yes
<b>state</b>	State Abbreviation	Two letter state abbreviation (FL, IA, etc.)	Yes
<b>zip</b>	Zip Code	Five digit zip code, represented as a string	Yes
<b>phone</b>	Phone Number	Phone number for this address, string	Yes

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### Plans sub-type

Field	Label	Definition	Required
<i>plan_id_type</i>	ID Type	Type of Plan ID. For all Marketplace plans this should be: HIOS-PLAN-ID	Yes
<i>plan_id</i>	Unique Identifier	The plan ID that was used in the plans.json as the plan_id value. For a Marketplace plan, this must be the 14-digit HIOS plan id.	Yes
<i>network_tier</i>	Network Tier	Tier for network (Example Values: PREFERRED, NON-PREFERRED, etc. Values should be all uppercase.) Must match a network tier defined in the corresponding plan record in a plans.json file.	Yes

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### Example

```
[
  {
    "npi": "1234567893",
    "type": "INDIVIDUAL",
    "name": {
      "first": "Sarah",
      "middle": "Maya",
      "last": "Ngyuen",
      "suffix": "Jr."
    },
    "addresses": [
      {
        "address": "123 Main St",
        "address_2": "Suite 120",
        "city": "Little Rock",
        "state": "AR",
        "zip": "72201",
        "phone": "2025551212"
      },
      {
        "address": "675 South St",
        "city": "Little Rock",
        "state": "AR",
        "zip": "72201",
        "phone": "2025551212"
      }
    ],
    "specialty": ["Ophthalmology", "Endocrinology"],
    "accepting": "accepting",
    "plans": [
      {
        "plan_id_type": "HIOS-PLAN-ID",
        "plan_id": "12345XX9876543",
        "network_tier": "PREFERRED"
      },
      {
        "plan_id_type": "HIOS-PLAN-ID",
        "plan_id": "12345XX9876543",
        "network_tier": "NON-PREFERRED"
      }
    ]
  }
]
```

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```
    }
  ],
  "languages": ["English", "Spanish", "Mandarin"],
  "gender": "Female",
  "last_updated_on": "2015-03-17"
},
{
  "npi": "1234567893",
  "type": "FACILITY",
  "facility_name": "Main Street Hospital",
  "facility_type": ["Hospital", "Dialysis"],
  "addresses": [
    {
      "address": "123 Main St",
      "address_2": "Suite 120",
      "city": "Little Rock",
      "state": "AR",
      "zip": "72201",
      "phone": "2025551212"
    }
  ],
  "plans": [
    {
      "plan_id_type": "HIOS-PLAN-ID",
      "plan_id": "12345XX9876543",
      "network_tier": "PREFERRED"
    },
    {
      "plan_id_type": "HIOS-PLAN-ID",
      "plan_id": "12345XX9876543",
      "network_tier": "NON-PREFERRED"
    }
  ],
  "last_updated_on": "2015-03-17"
}
]
```

## Appendix A

### Drugs - drugs.json

#### Description

drugs.json contains a list of drugs and the plans that cover them.

#### Schema

Field	Label	Definition	Required
<b>rxnorm_id</b>	Drug Identifier	RxCUI (Specific drug identifier from RXNORM)	Yes
<b>drug_name</b>	Drug Name	Name of Drug	Yes
<b>plans</b>	Plans	Array of plans that cover this drug (see "Plans sub-type" below)	Yes

#### Plans sub-type

Field	Label	Definition	Required
<b>plan_id_type</b>	ID Type	Type of Plan ID. For all Marketplace plans this should be: HIOS-PLAN-ID	Yes
<b>plan_id</b>	Unique Identifier	The plan ID that was used in the plans.json as the plan_id value. For a Marketplace plan, this must be the 14-digit HIOS plan id.	Yes

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Field	Label	Definition	Required
<i><b>drug_tier</b></i>	Drug Tier	Tier for formulary (Example Values: GENERIC, PREFERRED- GENERIC, NON-PREFERRED- GENERIC, SPECIALTY, BRAND, PREFERRED-BRAND, NON-PREFERRED-BRAND, ZERO-COST-SHARE- PREVENTIVE, MEDICAL- SERVICE, etc. Values should be all uppercase. )	Yes
<i><b>prior_authorization</b></i>	Prior Authorization Required	Is prior authorization required? - (boolean value: true or false)	No
<i><b>step_therapy</b></i>	Step Therapy Required	Is step therapy required? - (boolean value: true or false)	No
<i><b>quantity_limit</b></i>	Quantity Limit	Is there a quantity limit for this drug? - (boolean value: true or false)	No

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### Example

```
[
  {
    "rxnorm_id": "209459",
    "drug_name": "Acetaminophen 500 MG Oral Tablet [Tylenol]",
    "plans": [
      {
        "plan_id_type": "HIOS-PLAN-ID",
        "plan_id": "12345XX9876543",
        "drug_tier": "GENERIC",
        "prior_authorization": false,
        "step_therapy": false,
        "quantity_limit": false
      },
      {
        "plan_id_type": "HIOS-PLAN-ID",
        "plan_id": "56748XXX123933",
        "drug_tier": "GENERIC",
        "prior_authorization": false,
        "step_therapy": false,
        "quantity_limit": false
      }
    ]
  },
  {
    "rxnorm_id": "248656",
    "drug_name": "Azithromycin 500 MG Oral Tablet [Zithromax]",
    "plans": [
      {
        "plan_id_type": "HIOS-PLAN-ID",
        "plan_id": "12345XX9876543",
        "drug_tier": "GENERIC",
        "prior_authorization": false,
        "step_therapy": false,
        "quantity_limit": true
      },
      {
        "plan_id_type": "HIOS-PLAN-ID",
        "plan_id": "56748XXX123933",
        "drug_tier": "GENERIC",
```

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```
"prior_authorization": false,  
"step_therapy": false,  
"quantity_limit": false  
}  
]  
}  
]
```