

# Developer Documentation

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

## JSON

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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

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

The path to the URLs will be submitted via HIOS to CMS.

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

## Health Plans - `plans.json`

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### Description

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

### Schema

Field	Label	Definition	Required
<code>plan_id_type</code>	ID Type	Type of Plan ID. The preferred is the HIOS	Always

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Field	Label	Definition	Required
		Plan ID - HIOS-PLAN-ID	
<b>plan_id</b>	Unique Identifier	The 14-character, HIOS-generated Plan ID number. (Plan IDs must be unique, even across different markets.)	Always
<b>marketing_name</b>	Marketing Name	The name of the plan as it is displayed on HealthCare.gov	Always
<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.	Always
<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.	No
<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.	Always
<b>network</b>	Network	Array of networks	Always
<b>formulary</b>	Formularies	Array of drug lists	Always

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Field	Label	Definition	Required
<b>benefits</b>	Benefits	Array of benefits	No
<b>last_updated_on</b>	Last Updated On	ISO 8601 format (e.g. YYYY-MM-DD)	Always

### Network sub-type

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

### Formulary sub-type

Field	Label	Definition	Required
<b><i>drug_tier</i></b>	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.)	Always
<b><i>mail_order</i></b>	Mail Order	Does the formulary cover mail order? - (Values: true or false)	Always
<b><i>cost_sharing</i></b>	Cost Sharing	Array of cost sharing values (see "Cost sharing sub-type" below)	Always

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### Cost sharing sub-type

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

### 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.

Field	Label	Definition	Required
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Field	Label	Definition	Required
telemedicine	Offers Telemedicine	Does the plan cover telemedicine? - (Values: 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": "GENERIC",
        "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"
          },
          {
            "pharmacy_type": "1-MONTH-IN-MAIL",
            "copay_amount": 0.0,
            "copay_opt": "NO-CHARGE",
            "coinsurance_rate": 0.20,
            "coinsurance_opt": null
          }
        ]
      },
      {
        "drug_tier": "BRAND",
        "mail_order": true,
        "cost_sharing": [
```

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```
[
  {
    "pharmacy_type": "1-MONTH-IN-RETAIL",
    "copay_amount": 15.0,
    "copay_opt": null,
    "coinsurance_rate": 0.0,
    "coinsurance_opt": null
  },
  {
    "pharmacy_type": "1-MONTH-IN-MAIL",
    "copay_amount": 20.0,
    "copay_opt": "AFTER-DEDUCTIBLE",
    "coinsurance_rate": 0.10,
    "coinsurance_opt": "BEFORE-DEDUCTIBLE"
  }
],
"last_updated_on": "2015-03-17"
]
```

## Providers - providers.json

### Description

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

### Schema

Field	Label	Definition	Required
<b>npi</b>	National Provider ID	The National Provider Identifier (NPI) is a unique identification number for covered health care providers	Always
<b>type</b>	Type	Specify if INDIVIDUAL or FACILITY	Always
<b>plans</b>	Plans	Array of plans that cover this provider (see "Plans sub-type" below)	Always
<b>last_updated_on</b>	Last	Date of when the record for this provider has	Always

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Field	Label	Definition	Required
	Updated On	been last updated or refreshed - ISO 8601 format (e.g. YYYY-MM-DD)	

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

Field	Label	Definition	Required
<b>name</b>	Name	-	Always
<b>prefix</b>	Prefix	-	No
<b>first</b>	First Name	-	Always
<b>middle</b>	Middle Name	-	No
<b>last</b>	Last Name	-	Always
<b>suffix</b>	Suffix	-	No
<b>address</b>	Address	-	Always
<b>address</b>	Street Address	-	Always
<b>address_2</b>	Street Address 2	-	No
<b>city</b>	City	-	Always

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<b>Field</b>	<b>Label</b>	<b>Definition</b>	<b>Required</b>
<b><i>state</i></b>	State Abbreviation	-	Always
<b><i>zip</i></b>	Zip Code	-	Always
<b><i>phone</i></b>	Phone Number	-	Always
<b><i>specialty</i></b>	Specialty Type	An array of speciality types.	Always
<b><i>accepting</i></b>	Accepting Patients	Is the provider accepting patients? - (Values: true or false)	Always
<b><i>gender</i></b>	Gender	Values: Male, Female, Other	Optional
<b><i>languages</i></b>	Languages Spoken	An array of the languages spoken	Optional

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

<b>Field</b>	<b>Label</b>	<b>Definition</b>	<b>Required</b>
<b><i>facility_name</i></b>	Facility Name	-	Always
<b><i>facility_type</i></b>	Facility Type	An array of facility types.	Always
<b><i>address</i></b>	Address	-	Always
<b><i>address</i></b>	Street Address	-	Always



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Field	Label	Definition	Required
<i>address_2</i>	Street Address 2	-	No
<i>city</i>	City	-	Always
<i>state</i>	State Abbreviation	-	Always
<i>zip</i>	Zip Code	-	Always
<i>phone</i>	Phone Number	-	Always

### Plans sub-type

Field	Label	Definition	Required
<i>plan_id_type</i>	ID Type	Type of Plan ID. The preferred is the HIOS Plan ID - HIOS-PLAN-ID	Always
<i>plan_id</i>	Unique Identifier	The 14-character, HIOS-generated Plan ID number. (Plan IDs must be unique, even across different markets.)	Always
<i>network_tier</i>	Network Tier	Tier for network (Example Values: PREFERRED, NON-PREFERRED, etc. Values should be all uppercase. )	Always

### Example

```
[
  {
    "npi": "1234567890123456",
    "type": "INDIVIDUAL",
    "name": {
      "first": "Sarah",
```

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```
    "middle": "Maya",
    "last": "Ngyuen",
    "suffix": "Jr."
  },
  "address": {
    "address": "123 Main Street",
    "address_2": "Suite 120",
    "city": "Little Rock",
    "state": "AR",
    "zip": "72201"
  },
  "phone": "2025551212",
  "specialty": ["Ophthalmology"],
  "accepting": true,
  "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"
    }
  ],
  "languages": ["English", "Spanish", "Mandarin"],
  "last_updated_on": "2015-03-17"
},
{
  "npi": "1234567890123949",
  "type": "FACILITY",
  "facility_name": "Main Street Hospital",
  "facility_type": ["Hospital"],
  "address": {
    "address": "123 Main Street",
    "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"
```

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```
}  
]
```

# 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)	Always
<b>drug_name</b>	Drug Name	Name of Drug	Always
<b>plans</b>	Plans	Array of plans that cover this drug (see "Plans sub-type" below)	Always

## Plans sub-type

Field	Label	Definition	Required
<b><i>plan_id_type</i></b>	ID Type	Type of Plan ID. The preferred is the HIOS Plan ID - HIOS-PLAN-ID	Always
<b><i>plan_id</i></b>	Unique Identifier	The 14-character, HIOS-generated Plan ID number. (Plan IDs must be unique, even across different markets.)	Always

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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. )	Always
<i>prior_authorization</i>	Prior Authorization Required	Is prior authorization required? - (Values: true or false)	Always
<i>step_therapy</i>	Step Therapy Required	Is step therapy required? - (Values: true or false)	Always
<i>quantity_limit</i>	Quantity Limit	Is there a quantity limit for this drug? - (Values: true or false)	Always

### 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
      }
    ],
  }
]
```

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