Machine-Readable Files: Data Schemas (version 1.0)

In accordance with Tex. Ins. Code §1662.107 and 28 Tex. Admin. Code §21.5503, an issuer's machine-readable files must include data elements consistent with the data schemas described here.

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The data schemas contained in this document are based on schemas published by the Centers for Medicare and Medicaid Services, on the following web pages, as of November 15, 2021:

github.com/CMSgov/price-transparency-guide/tree/master/schemas/in-network-rates;

github.com/CMSgov/price-transparency-guide/tree/master/schemas/allowed-amounts; and

github.com/CMSgov/price-transparency-guide/tree/master/schemas/prescription-drugs

In-Network File Schema (version 1.0)

Field	Name	Type	Definition	Required
reporting_entity_name	Entity Name	String	The legal name of the entity publishing the machine-readable file.	Yes
reporting_entity_type	Entity Type	String	The type of entity that is publishing the machine-readable file (e.g., a group health plan, health insurance issuer, or a third party with which the plan or issuer has contracted to provide the required information, such as a third-party administrator, a health care claims clearinghouse, or a health insurance issuer that has contracted with a group health plan sponsor).	Yes
reporting_plans	In-Network Plans	Array	An array of reporting plan object types	Yes
in_network	In-Network Negotiated Rates	Array	An array of in-network object types	Yes

Field	Name	Type	Definition	Required
last_updated_on	Last Updated On	String	The date in which the file was last updated. Date must be in an ISO 8601 format (e.g., YYYY-MM-DD).	Yes
version	Version	String	The version of the schema for the produced information.	No

Reporting Plans Object

Information about the plan that is being reported on for the in-network negotiated rates for all items and services. Multiple Reporting Plan Objects can be included in this array for all of the plans that have identical negotiated rates in the in_network array.

Field	Name	Type	Definition	Required
plan_name	Plan Name	String	The plan name and name of plan sponsor and/or insurance company.	Yes
plan_id_type	Plan ID Type	String	Allowed values: "EIN" and "HIOS".	Yes
plan_id	Plan ID	String	The 14-digit Health Insurance Oversight System (HIOS) identifier, or, if the 14-digit HIOS identifier is not available, the 5-digit HIOS identifier, or, if no HIOS identifier is available, the Employer Identification Number (EIN)for each plan or coverage offered by a plan or issuer.	Yes
plan_market_type	Market Type	String	Allowed values: "group" and "individual".	Yes

In-Network Object

This type defines an in-network object.

Field	Name	Type	Definition	Required
negotiation_arrangement	Negotiation Arrangement	String	An indication as to whether a reimbursement arrangement other than a standard fee-for-service model applies. Allowed values: "ffs", "bundle", or "capitation".	Yes
name	Name	String	This is name of the item or service that is offered.	Yes
billing_code_type	Billing Code Type	String	Common billing code types. Please see the list of the currently allowed codes at the bottom of this document.	Yes
billing_code_type_version	Billing Code Type Version	String	There might be versions associated with the billing_code_type. For example, Medicare's current (as of 5/24/21) MS-DRG version is 37.2.	Yes
billing_code	Billing Code	String	The code used by a plan or issuer or its in-network providers to identify health care	Yes

Field	Name	Type	Definition	Required
			items or services for purposes of billing, adjudicating, and paying claims for a covered item or service.	
description	Description	String	Brief description of the item or service.	No
negotiated_rates	Negotiated Rates	Array	This is an array of negotiated rate details object types.	Yes
bundled_codes	Bundled Codes	Array	This is an array of bundle code objects. This array contains all the different codes in a bundle if bundle is selected for negotiation_arrangement.	No
covered_services	Covered Service	Array	This is an array of covered services objects. This array contains all the different codes in a capitation arrangement if capitation is selected for negotiation_arrangement.	No

Bundle Code Object

Field	Name	Type	Definition	Required
billing_code_type	Billing Code Type	String	Common billing code types. Please see the list of the currently allowed codes at the bottom of this document.	Yes
billing_code_type_version	Billing Code Type Version	String	There might be versions associated with the billing_code_type. For example, Medicare's current (as of 5/24/21) MS-DRG version is 37.2.	Yes
billing_code	Billing Code	String	The code used by a plan or issuer or its in-network providers to identify health care items or services for purposes of billing, adjudicating, and paying claims for a covered item or service.	Yes
description	Description	String	Brief description of the item or service.	Yes

Covered Services Object

Field	Name	Type	Definition	Required
billing_code_type	Billing Code Type	String	Common billing code types. Please see the list of the currently allowed codes at the bottom of this document.	Yes
billing_code_type_version	Billing Code Type Version	String	There might be versions associated with the billing_code_type. For example, Medicare's current (as of 5/24/21) MS-DRG version is 37.2.	Yes
billing_code	Billing Code	String	The code used by a plan or issuer or its in-network providers to identify health care items or services for purposes of billing, adjudicating, and paying claims for a covered item or service.	Yes
description	Description	String	Brief description of the item or service.	Yes

Negotiated Rate Details Object

This type defines a negotiated rate object.

Field	Name	Type	Definition	Required
negotiated_prices	Negotiated Prices	Array	An array of negotiated price objects defines information about the type of negotiated rate as well as the dollar amount of the negotiated rate.	Yes
provider_groups	Provider Groups	Array	The providers object defines information about the provider and their associated TIN related to the negotiated price.	Yes

Providers Object

Field	Name	Type	Definition	Required
npi	NPI	Array	An array of individual (type 1) provider identification numbers (NPI).	Yes
tin	Tax Identification Number	Object	The tax identifier object contains tax information on the place of business.	Yes

Tax Identifier Object

Field	Name	Type	Definition	Required
type	Type	String	Allowed values: "ein" and "npi".	Yes
value	Value	String	Either the unique identification number issued by the Internal Revenue Service (IRS) for type "ein" or the provider's npi for type "npi".	Yes

Additional Notes

For most businesses reporting cases, a tax identification number (TIN) is used to represent a business. There are situations where a provider's social security number is still used as a TIN. In order to keep private personally identifiable information out of these files, substitute the provider's NPI number for the social security number. When an NPI number is used, it is assumed that the provider would otherwise be reporting by their social security number.

Negotiated Price Object

The negotiated price object contains negotiated pricing information on the type of negotiation for the covered item or service.

Field	Name	Type	Definition	Required
negotiated_type	Negotiated Type	String	There are a few ways in which negotiated rates can happen. Allowed values: "negotiated", "derived", and "fee schedule". See Additional Notes.	Yes
negotiated_rate	Negotiated Rate	Number	The dollar amount based on the negotiation_type.	Yes
expiration_date	Expiration Date	String	The date in which the agreement for the negotiated_price based on the negotiated_type ends. Date must be in an ISO 8601 format (e.g., YYYY-MM-DD). See Additional Notes.	Yes
service_code	Place of Service Code	An array of two-digit strings	The CMS-maintained two-digit code that is placed on a professional claim to indicate the setting in which a service was provided. When the attribute	Yes

Field	Name	Type	Definition	Required
			of billing_class has the value of "professional", service_code is required.	
billing_class	Billing Class	String	Allowed values: "professional", "institutional".	Yes

Additional Notes

For negotiated_type there are three allowable values: "negotiated", "derived", and "fee schedule". The values are defined as:

- negotiated: If applicable, the negotiated rate, reflected as a dollar amount, for each covered item or service under the plan or coverage that the plan or issuer has contractually agreed to pay an in-network provider, except for prescription drugs that are subject to a fee-for-service reimbursement arrangement, which must be reported in the prescription drug machine-readable file. If the negotiated rate is subject to change based on participant, beneficiary, or enrollee-specific characteristics, these dollar amounts should be reflected as the base negotiated rate applicable to the item or service prior to adjustments for participant, beneficiary, or enrollee-specific characteristics.
- derived: If applicable, the price that a plan or issuer assigns to an item or service for the purpose of internal accounting, reconciliation with providers, or submitting data in accordance with the requirements of 45 CFR §153.710(c).
- fee schedule: If applicable, the rate for a covered item or service from a particular in-network provider, or providers, that a group health plan or health insurance issuer uses to determine a participant's, beneficiary's, or enrollee's cost-sharing liability for the item or service, when that rate is different from the negotiated rate.

For expiration_date, there may be a situation when a contract arrangement is "evergreen". For evergreen contracts that automatically renew on a date provided in the contract, the expiration date you include should be the day immediately before the day of the automatic renewal.

In a situation where there is not an expiration date (see discussion here), the value 9999-12-31 would be entered.

Additional Notes Concerning billing_code_type

Negotiated rates for items and services can come from a variety of billing code standards. The list of possible allowed values is in the following table with the name of the standard and the values representing that standard that would be expected if being reported on.

Standard Name	Reporting Value	Additional Information
Current Procedural Terminology	CPT	American Medical Association
National Drug Code	NDC	FDA NDC Background
Healthcare Common Procedural Coding System	HCPCS	CMS HCPCS
Revenue Code	RC	What is revenue code?
International Classification of Diseases	ICD	ICD Background
Medicare Severity Diagnosis Related Groups	MS-DRG	CMS DRGs
Refined Diagnosis Related Groups	R-DRG	
Severity Diagnosis Related Groups	S-DRG	

Standard Name	Reporting Value	Additional Information
All Patient, Severity-Adjusted Diagnosis Related Groups	APS-DRG	
All Patient Diagnosis Related Groups	AP-DRG	
All Patient Refined Diagnosis Related Groups	APR-DRG	AHRQ Documentation
Ambulatory Payment Classifications	APC	APC Background Information
Local Code Processing	LOCAL	
Enhanced Ambulatory Patient Grouping	EAPG	EAPG
Health Insurance Prospective Payment System	HIPPS	HIPPS
Current Dental Terminology	CDT	CDT

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Out-Of-Network Allowed Amount File Schema (version 1.0)

Field	Name	Type	Definition	Required
reporting_entity_name	Entity Name	String	The legal name of the entity publishing the machine-readable file.	Yes
reporting_entity_type	Entity Type	String	The type of entity that is publishing the machine-readable file (e.g., a group health plan, health insurance issuer, or a third party with which the plan or issuer has contracted to provide the required information, such as a third-party administrator, a health care claims clearinghouse, or a health insurance issuer that has contracted with a group health plan sponsor).	Yes
reporting_plans	Allowed Amount Plans	Array	An array of reporting plan object types.	Yes
out_of_network	Out of Network	Array	An array of out-of-network object types.	Yes

Field	Name	Type	Definition	Required
last_updated_on	Last Updated On	String	The date in which the file was last updated. Date must be in an ISO 8601 format (e.g., YYYY-MM-DD).	Yes
version	Version	String	The version of the schema for the produced information.	No

Reporting Plans Object

Information about the plan that is being reported on for the allowed amounts. Multiple Reporting Plan Objects can be included in this array for all of the plans that have identical out-of-network objects in the out_of_network array.

Field	Name	Type	Definition	Required
plan_name	Plan Name	String	The plan name and name of plan sponsor and/or insurance company.	Yes
plan_id_type	Plan ID Type	String	Allowed values: "EIN" and "HIOS".	Yes
plan_id	Plan ID	String	The 14-digit Health Insurance Oversight System (HIOS) identifier, or, if the 14-digit HIOS identifier is not available, the 5-digit HIOS identifier, or, if no HIOS identifier is available, the Employer Identification Number (EIN)for each plan or coverage offered by a plan or issuer.	Yes
plan_market_type	Market Type	String	Allowed values: "group" and "individual".	Yes

Out-Of-Network Object

The out-of-network object contains information related to the service that was provided out of network.

Field	Name	Type	Definition	Required
name	Name	String	The name of each item or service for which the costs are payable, in whole or in part, under the terms of the plan or coverage.	Yes
billing_code_type	Billing Code Type	String	Common billing code types. Please see the list of the currently allowed codes at the bottom of this document.	Yes
billing_code	Billing Code	String	The billing_code_type code for the item or service.	Yes
billing_code_type_version	Billing Code Type Version	String	There might be versions associated with the billing_code_type. For example, Medicare's current (as of 5/24/21) MS-DRG version is 37.2.	Yes
description	Description	String	Brief description of the item or service. In the case of items and services that are associated with common billing codes (such as the HCPCS codes), the codes associated short text	Yes

Field	Name	Type	Definition	Required
			description may be provided. In the case of NDCs for prescription drugs, the plain language description must be the proprietary and nonproprietary names assigned to the NDC by the FDA.	
allowed_amounts	Rates	Array	An array of allowed amounts objects.	Yes

Allowed Amounts Object

The allowed amounts object documents the entity or business and service code where the service was provided out of network.

Field	Name	Type	Definition	Required
tin	Tax Identification Number	Object	The tax identifier object contains tax information on the place of business.	Yes
service_code	Place of Service Code	An array of two-digit strings	The CMS-maintained two-digit code that is placed on a professional claim to indicate the setting in which a service was provided. When the attribute of billing_class has the value of "professional", service_code is required.	Yes
billing_class	Billing Class	String	Allowed values: "professional", "institutional".	Yes
payments	Payments	Array	An array of out-of-network payments objects.	Yes

Tax Identifier Object

Field	Name	Type	Definition	Required
type	Type	String	Allowed values: "ein" and "npi".	Yes
value	Value	String	Either the unique identification number issued by the Internal Revenue Service (IRS) for type "ein" or the provider's npi for type "npi".	Yes

Additional Notes

For most businesses reporting cases, a tax identification number (TIN) is used to represent a business. There are situations where a provider's social security number is still used as a TIN. In order to keep private personally identifiable information out of these files, substitute the provider's NPI number for the social security number. When an NPI number is used, it is assumed that the provider would otherwise be reporting by their social security number.

Out-Of-Network Payment Object

The payment object documents the allowed amounts the plan has paid for the service that was provided out of network.

Field	Name	Type	Definition	Required
allowed_amount	Allowed Amount	Number	The allowed amount must be reported as the actual dollar amount the plan or issuer paid to the out-of-network provider for a particular covered item or service, plus the participant's, beneficiary's, or enrollee's share of the cost. See Additional Notes.	Yes
providers	Providers	Array	An array of provider objects.	Yes

Additional Notes

The allowed_amount is each unique allowed amount, reflected as a dollar amount, that a plan or issuer paid for a covered item or service furnished by an out-of-network provider during the 90-day time period that begins 180 days prior to the publication date of the machine-readable file. To protect patient privacy, a plan or issuer must not provide out-of-network allowed amount data for a particular provider and a particular item or service when compliance would require the plan or issuer to report out-of-network allowed amounts paid to a particular provider in connection with fewer than 20 different claims for payment. Issuers, service providers, or other parties with which the plan or issuer has contracted may aggregate out-of-network allowed amounts for more than one plan or insurance policy or contract. If information is aggregated, the 20-minimum-claims threshold applies at the plan or issuer level.

Provider Object

The provider object defines the list of NPIs and their billed charges for the service provided out of network.

Field	Name	Type	Definition	Required
billed_charge	Billed Charge	Number	The total dollar amount charges for an item or service billed to a plan or issuer by an out-of-network provider.	Yes
npi	National Provider Identifier	Array	An array of provider identification numbers (NPI).	Yes

Additional Notes Concerning billing_code_type

Negotiated rates for items and services can come from a variety of billing code standards. The list of possible allowed values is in the following table with the name of the standard and the values representing that standard that would be expected if being reported on.

Standard Name	Reporting Value	Additional Information
Current Procedural Terminology	CPT	American Medical Association
National Drug Code	NDC	FDA NDC Background
Healthcare Common Procedural Coding System	HCPCS	CMS HCPCS
Revenue Code	RC	What is revenue code?
International Classification of Diseases	ICD	ICD Background
Medicare Severity Diagnosis Related Groups	MS-DRG	CMS DRGs
Refined Diagnosis Related Groups	R-DRG	
Severity Diagnosis Related Groups	S-DRG	

Standard Name	Reporting Value	Additional Information
All Patient, Severity-Adjusted Diagnosis Related Groups	APS-DRG	
All Patient Diagnosis Related Groups	AP-DRG	
All Patient Refined Diagnosis Related Groups	APR-DRG	AHRQ Documentation
Ambulatory Payment Classifications	APC	APC Background Information
Local Processing	LOCAL	
Enhanced Ambulatory Patient Grouping	EAPG	EAPG
Health Insurance Prospective Payment System	HIPPS	HIPPS
Current Dental Terminology	CDT	CDT

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Rx File Schema (version 1.0)

This schema describes the Rx attributes that are necessary for the drug flat file.

Field	Name	Type	Definition	Required
reporting_entity_name	Entity Name	String	The legal name of the entity publishing the machine-readable file.	Yes
reporting_entity_type	Entity Type	String	The type of entity that is publishing the machine-readable file (e.g., a group health plan, health insurance issuer, or a third party with which the plan or issuer has contracted to provide the required information, such as a third-party administrator, a health care claims clearinghouse, or a health insurance issuer that has contracted with a group health plan sponsor).	Yes
plan_name	Plan Name	String	The plan name and name of plan sponsor and/or insurance company (e.g., "Maximum Health Plan: Alpha Insurance Group").	Yes
plan_id_type	Plan ID Type	String	Allowed values: "EIN" and "HIOS".	Yes

Field	Name	Type	Definition	Required
plan_id	Plan ID	String	The 14-digit Health Insurance Oversight System (HIOS) identifier, or, if the 14-digit HIOS identifier is not available, the 5-digit HIOS identifier, or, if no HIOS identifier is available, the Employer Identification Number (EIN), for each coverage option offered by a plan or issuer.	Yes
plan_market_type	Market Type	String	Allowed values: "group" and "individual".	Yes
drugs	Drugs	Array	An array of drug information objects.	Yes
last_updated_on	Last Updated On	String	The date in which the file was last updated. Date must be in an ISO 8601 format (e.g., YYYY-MM-DD).	Yes

Drug Object

This type defines a drug object.

Field	Name	Type	Definition	Required
drug_name	Drug Name	String	The proprietary and nonproprietary name assigned to the National Drug Code (NDC) by the Food and Drug Administration (FDA).	Yes
drug_type	Drug Type	String	Allowed values: "branded", "generic", or "biosimilar".	Yes
ndc	National Drug Code	String	A unique 10-digit or 11-digit, 3-segment number assigned by the FDA, which provides a universal product identifier for drugs in the United States. Data reporting will be on the **first 8 digits** of the full 10-digit or 11-digit NDCs. The last 2 digits of the full 10-digit or 11-digit NDC specify quantity and do not have an impact on the negotiated rate or historic net price.	Yes
prices	Prices	Array	An array of drug price objects.	Yes

Drug Price Object

This type defines a drug price object.

Field	Name	Type	Definition	Required
historical_net_price	Historical Net Price	Number	The retrospective average amount paid, reflected as a dollar amount, by a plan or issuer to an in-network provider for a prescription drug. See Additional Notes.	Yes
historical_net_reporting_period	Historical Net Price Reporting Period	String	The date in which the reporting period for the historical_net_price ended. Date must be in an ISO 8601 format (e.g., YYYY-MM-DD).	Yes
negotiated_rate	Negotiated Rate	Number	The amount, reflected as a dollar amount, that a plan or issuer has contractually agreed to pay an in-network provider. See Additional Notes.	Yes

Field	Name	Type	Definition	Required
administrative_fee	Administrative Fee	Number	The fee, reflected as a dollar amount, charged by the Pharmacy Benefit Manager to the plan or issuer for administrating each prescription. This fee must be reflected separately only for the negotiated rate data element.	Yes
dispensing_fee	Dispensing Fee	Number	The fee, reflected as a dollar amount, for dispensing a prescription applied at the point of sale. This fee must be reflected separately only for the negotiated rate data element.	Yes
transaction_fee	Transaction Fee	Number	Any fees, reflected as a dollar amount, assessed when processing a prescription that is not associated with the administrative or dispensing fee. This fee must be reflected separately only for the negotiated rate data element.	Yes

Field	Name	Type	Definition	Required
tin	Tax Identification Number	String	The unique identification number issued either by the Social Security Administration or by the Internal Revenue Service (IRS).	Yes
service_code	Place of Service Code	String	The CMS-maintained two-digit code that is placed on a professional claim to indicate the setting in which a service was provided.	Yes
npi	National Provider Identifier	Array	An array of type 1 individual national provider identification numbers (NPI).	No
Pharmacies	Pharmacies	Array	A list of different pharmacies objects that have specific negotiated rates for the specific NDC.	No

Additional Notes

The historical_net_price is the average dollar price for the 90-day period beginning 180 days before the file publication date, including any in-network pharmacy or other prescription drug dispenser, for a prescription drug, inclusive of

any reasonably allocated rebates, discounts, chargebacks, fees, and any additional price concessions received by the plan or issuer with respect to the prescription drug or prescription drug service. The historic net price must be reported at the billing unit level as defined by the NCPDP. The standard contains three units: each "EA," milliliter "ML," or gram "GM."

Further notes for reasonable allocation of rebates, discounts, chargebacks, fees, and any additional price concessions.

- If the total amount of the price concession is known to the plan or issuer on the file publication date, then rebates, discounts, chargebacks, fees, and other price concessions must be reasonably allocated by total known dollar amount.

If the total amount of the price concession is not known to the plan or issuer on the file publication date, then rebates, discounts, chargebacks, fees, and other price concessions should be reasonably allocated using a good faith, reasonable estimate of the average price concessions based on the rebates, discounts, chargebacks, fees, and other price concessions received over a time period prior to the current reporting period and of equal duration to the current reporting period.

The negotiated_rate is the rate agreed to pay an in-network provider, including an in-network pharmacy or other prescription drug dispenser, whether directly or indirectly, including through a third-party administrator or pharmacy benefit manager, for prescription drugs. The negotiated rate must be reported at the billing unit level as defined by NCPDP. The standard contains three units "EA," "ML," or "GM." Fees that are assessed at the point of sale must be reflected separately as a dollar amount (see Dispensing Fee, Administrative Fee, and Transaction Fee data elements).

Fees that are assessed at the point of sale must be reflected separately as a dollar amount
(see dispensing_fee, administrative_fee, and transaction_fee data elements).

Pharmacies Object

Different types of pharmacies that have the specific negotiated rate and historical net price for the defined pharmacy_id_type.

Field	Name	Type	Definition	Required
pharmacy_id_type	Provider ID Type	String	Allowed values: "NCPDP ID", "NCPDP Chain Code", or "NPI". Note: NPIs must be of type 2 to be included in pharmacy_ids.	Yes
pharmacy_ids	Pharmacy IDs	Array	The pharmacy identifier based on the pharmacy_id_type. See Additional Notes.	Yes

Additional Notes

The pharmacy_ids element is dependent on the pharmacy_id_type. The following pharmacy_id_type values are allowed:

- NCPDP ID – The National Council for Prescription Drug Programs (NCPDP) ID – The unique 7-digit number assigned by the NCPDP to every licensed pharmacy and non-Pharmacy Dispensing Site (NPDS) in the United States and its territories. This number represents a unique pharmacy entity or line of business and is used to identify licensed pharmacies and NPDSs to insurance companies, health care providers, and other entities.
- NCPDP Chain Code – The NCPDP Chain Code – The ID number provided by the NCPDP that represents a group of pharmacies under the same ownership. If the plan or issuer includes the NCPDP Chain Code, it must also include

the NCPDP IDs for each pharmacy that is represented in the group of pharmacies that are identified by the NCPDP Chain Code.

- NPI – The NPI Type 2 – The unique 10-digit identification number issued to a provider by CMS for an organization of health care providers, such as a medical group or pharmacy.

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