Chronic Conditions Warehouse

CODEBOOK:
Medicare Part D Formulary File

OCTOBER 2022 | VERSION 2.1

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Revision Log

Date	Changed by	Revisions	Version
October 2022	K. Schneider	Added variables in the Part D Senior Savings (PDSS) model file. Updated value description for TIER_ID	2.1
October 2021	K. Schneider	Migrated codebook to new document template. Added two variables new for the 2020 file — for the indication-based formulary file: DISEASE and MESH_CUI.	2.0
May 2017	K. Schneider C. Alleman	Initial release of codebook for PTD Formulary file	1.0

Tips on Navigating the Codebook

This document is a detailed codebook that describes each variable in the Medicare Formulary research files. Because the files have many variables, we have included several ways for users to quickly find the information they need:

- A complete listing of all variables in the files, in alphabetical order based on their SAS variable names.
- Individual entries for each variable that contain a short description of the variable, the possible values for the variable, and, in many cases, notes that discuss how the variable was constructed and should be used.

We have included hyperlinks throughout the codebook to make it easier for analysts to navigate between the table of contents and the detailed entries for the individual variables:

- Clicking on any variable name in the Table of Contents will take you to the detailed description for that variable.
- From the detailed description for any individual variable, clicking on the ^Back to TOC^ link after each variable description will take you back to the Table of Contents.

Table of Contents

This section of the codebook contains a list of all variables in alphabetical order based on the SAS variable name.

Quick links: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Variable Details

This section of the codebook contains one entry for each variable in the Medicare Formulary research file. Each entry contains variable details to facilitate understanding and use of the variables.

BN

LABEL: Brand Name

DESCRIPTION: This is the brand name of the dispensed PDE, according to the First DataBank (FDB) reference files. The name that appears on the package label provided by the manufacturer. When this variable appears in the Formulary file, it is the FDB brand name for a drug product on the formulary.

SHORT NAME: BN

LONG NAME: BN

TYPE: CHAR

LENGTH: 30

SOURCE: First DataBank

VALUES: text description; DIABETIC SUPPLY for all diabetic supplies

COMMENT: In the PDE file, this variable is populated by linking to the proprietary First DataBank MedKnowledge database by matching on the National Drug Code (NDC; variable in the PDE files called the product service identifier PROD_SRVC_ID). In the Formulary file, this variable is first available in 2010. It is populated by matching the drug products on the Part D Plan submitted formulary to FDB. Part D plan sponsors submit the formulary to the CMS Health Plan Management System (HPMS). Plans identify the drug products on their formularies using the National Library of Medicine RxNorm Concept Unique Identifiers (RXCUIs). Each RXCUI corresponds to a unique brand name and clinical formulation (same ingredients, strength, and dosage form). Additional details regarding the FDB source data are available at: http://www.fdbhealth.com/fdb-medknowledge/

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CONTRACT_ID

LABEL: Part D Contract Identifier

DESCRIPTION: This variable is the unique number CMS assigns to each contract that a Part D plan has with CMS. This field is a key that links of Part D sponsor's contract and plan identifiers.

SHORT NAME: —

LONG NAME: CONTRACT_ID

TYPE: CHAR

LENGTH: 5

SOURCE: CMS (HPMS files)

VALUES: 5-digit alpha/numeric value

COMMENT: Prior to 2015, this variable was always encrypted to comply with CMS privacy rules. You need to know both the Part D contract number and plan benefit package identification number (variable called PLAN_ID) in order to identify the specific plan benefit package offered to beneficiaries. This variable corresponds with the CONTRACT_NAME variable, which is the contract name that corresponds with this number. The CCW constructs the Plan Characteristics file from information submitted by Part D plan sponsors to CMS's Health Plan Management System (HPMS).

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COPAY

LABEL: Copay

DESCRIPTION: This variable identifies the beneficiary copayment amount for the drug products covered by the Part D Senior Savings (PDSS) model. The insulin drug products (represented by the FRMLRY_RX_ID) covered as part of the PDSS have a different payment structure than other insulins (or other drug products) on the formulary.

SHORT NAME: COPAY

LONG NAME: COPAY

TYPE: NUM

LENGTH: 3

SOURCE: CMS (HPMS files)

VALUES: up to 3-digit numeric value

COMMENT: The PDSS Model file was new in 2021. Additional details regarding this CMS Innovation Center Model are available on the CMS website.

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DISEASE

LABEL: Condition

DESCRIPTION: This variable is the FDA-approved indication for which the drug (represented by the FRMLRY_RX_ID) is considered on-formulary.

SHORT NAME: DISEASE

LONG NAME: DISEASE

TYPE: CHAR

LENGTH: 100

SOURCE: CMS (HPMS files)

VALUES: Text description (e.g., CROHN DISEASE and ARTHRITIS, PSORIATIC)

COMMENT: Starting in 2020, Medicare Part D plan sponsors may limit formulary inclusion of a Part D drug to only certain FDA-approved indications. The corresponding standardized medical subject headings (MeSH) for this value appears in the variable called "MESH_CUI." Both variables are included in the CMS-created indication-based reference file in HPMS for plan sponsors to use for indication-based drug coverage https://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/HPMS/Downloads/HPMS-Memos/Weekly/SysHPMS-Memo-2018-Aug-29th.pdf

The US National Library of Medicine maintains the standardized MeSH. MeSH is a hierarchically-organized terminology for indexing and cataloging of biomedical information. It is used for the indexing of PubMed and other NLM databases. Additional information is available on the NLM.NIH.gov website - https://www.nlm.nih.gov/research/umls/sourcereleasedocs/current/MSH/sourcerepresentation.html

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FORMULARY_ID

LABEL: Formulary Identification Number

DESCRIPTION: This variable is the unique identification number assigned to each formulary. Part D plans submit their formularies to CMS and identify the drug products that are covered using the National Library of Medicine's RxNorm Concept Unique Identifiers (RXCUIs). The same formulary may be used by more than one plan benefit package (PBP) within a contract.

SHORT NAME: FORMULARY_ID

LONG NAME: FORMULARY_ID

TYPE: CHAR

LENGTH: 8

SOURCE: PDE and CMS HPMS (derived)

VALUES: 8-digit numeric value

COMMENT: Researchers interested in linking the Utilization Management (UM) variables (tier, step therapy, quantity limits, and prior authorization) to the PDE data will need to link the FORMULARY_ID and FRMLRY_RX_ID to the Formulary Characteristics file to get the UM variables. The CCW constructs a Formulary Characteristics file from the CMS Approved Formulary Data found in the CMS's Health Plan Management System (HPMS). This variable is first available in 2010. This variable was always encrypted from 2010–2012 to comply with CMS privacy rules.

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FRMLRY_RX_ID

LABEL: CCW Formulary Drug Identifier

DESCRIPTION: This variable is a CCW-created identifier for a drug product that is found in a Part D prescription drug plan's formulary. Part D Plans submit their formularies to CMS and identify drug products using the National Library of Medicine RxNorm Concept Unique Identifiers (RXCUIs). There can be several drug products submitted that are the same clinical formulation (same ingredients, strength, and dosage form) but different brand names. Each RXCUI corresponds to a unique brand name and clinical formulation. The CCW Formulary drug ID is analogous to an RXCUI.

SHORT NAME: FRMLRY_RX_ID

LONG NAME: FRMLRY_RX_ID

TYPE: CHAR

LENGTH: 8

SOURCE: PDE and CMS HPMS (derived)

VALUES: 8-digit number
The value: 99999999 indicates diabetic supplies.

COMMENT: This variable was new in 2010. The Formulary Characteristics files are built from the CMS Approved Formulary Data found in the CMS' Health Plan Management System (HPMS) where a proxy NDC is assigned to each RXCUI. The proxy NDC for each drug product is mapped to a unique First DataBank (FDB) brand name and proprietary clinical formulation identifier which is then assigned a CCW sequence number (FRMLRY_RX_ID). In order for a PDE record to link to the Formulary Characteristics files, the drug product on the PDE must map to a FRMLRY_RX_ID in the formulary associated with the plan of record. Researchers interested in linking the Utilization Management (UM) variables (tier, step therapy, quantity limits, and prior authorization) to the PDE data will need to link the FORMULARY_ID and FRMLRY_RX_ID to the Formulary Characteristics file to get the UM variables.

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GCDF

LABEL: Dosage Form Code

DESCRIPTION: This variable is the dosage form code according to the First DataBank (FDB) reference files. The dosage form describes the physical presentation of a drug, such as tablet, capsule, or liquid. It may also incorporate the delivery and release mechanism of the drug. When this variable appears in the Formulary file, it is the FDB dosage form code for a drug product on the formulary.

SHORT NAME: GCDF

LONG NAME: GCDF

TYPE: CHAR

LENGTH: 2

SOURCE: First DataBank

VALUES: 2-digit alpha/numeric code (e.g., CA [capsule], PS [adhesive patch, medicated])

COMMENT: The narrative description for this code appears in the dosage form code description variable (called GCDF_DESC). In the Formulary file, this variable is populated by matching the drug products on the Part D Plan submitted formulary to FDB. Part D plan sponsors submit the formulary to the CMS Health Plan Management System (HPMS). Plans identify the drug products on their formularies using the National Library of Medicine RxNorm Concept Unique Identifiers (RXCUIs). Each RXCUI corresponds to a unique brand name and clinical formulation (same ingredients, strength, and dosage form). In the PDE file, this variable is populated by linking to the proprietary First DataBank MedKnowledge database by matching on the National Drug Code (NDC; variable in the PDE files called the product service identifier PROD_SRVC_ID). Additional details regarding the FDB source data are available at: http://www.fdbhealth.com/fdb-medknowledge/

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GCDF_DESC

LABEL: Dosage Form Code Description

DESCRIPTION: This variable describes the dosage form of a clinical formulation, according to the First DataBank (FDB) reference files. The dosage form is the physical presentation of a drug, such as tablet, capsule, or liquid. It may also incorporate the delivery and release mechanism of the drug. When this variable appears in the Formulary file, it is the FDB dosage form code description for a drug product on the formulary.

SHORT NAME: GCDF_DESC

LONG NAME: GCDF_DESC

TYPE: CHAR

LENGTH: 40

SOURCE: First DataBank

VALUES: Narrative description (e.g., DROPS or TABLET)

COMMENT: The accompanying FDB code for this description appears in the dosage form code variable (called GCDF). In the Formulary file, this variable is populated by matching the drug products on the Part D Plan submitted formulary to FDB. Part D plan sponsors submit the formulary to the CMS Health Plan Management System (HPMS). Plans identify the drug products on their formularies using the National Library of Medicine

RxNorm Concept Unique Identifiers (RXCUIs). Each RXCUI corresponds to a unique brand name and clinical formulation (same ingredients, strength, and dosage form).

In the PDE file, this variable is populated by linking to the proprietary First DataBank MedKnowledge database by matching on the National Drug Code (NDC; variable in the PDE files called the product service identifier PROD_SRVC_ID). Additional details regarding the FDB source data are available at: http://www.fdbhealth.com/fdb-medknowledge/

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GNN

LABEL: Generic Name

DESCRIPTION: This is the generic name of the dispensed PDE, according to the First DataBank (FDB) reference files. It is the drug ingredient name adopted by United States Adopted Names (USAN). When this variable appears in the Formulary file, it is the FDB generic name for a drug product on the formulary.

SHORT NAME: GNN

LONG NAME: GNN

TYPE: CHAR

LENGTH: 30

SOURCE: First DataBank

VALUES: text description of drug (e.g., RISEDRONATE SODIUM, MEMANTINE HCL)

COMMENT: FDB uses the chemical name when the USAN name is not available. For multi-ingredient products, abbreviations may be used (e.g., HCTZ [Hydrochlorothiazide] and PP [Phenylpropanolamine]). In the Formulary file, this variable is populated by matching the drug products on the Part D Plan submitted formulary to FDB. Part D plan sponsors submit the formulary to the CMS Health Plan Management System (HPMS). Plans identify the drug products on their formularies using the National Library of Medicine

RxNorm Concept Unique Identifiers (RXCUIs). Each RXCUI corresponds to a unique brand name and clinical formulation (same ingredients, strength, and dosage form). In the PDE file, this variable is populated by linking to the proprietary First DataBank MedKnowledge database by matching on the National Drug Code (NDC; variable in the PDE files called the product service identifier PROD_SRVC_ID). Additional details regarding the FDB source data are available at: http://www.fdbhealth.com/fdb-medknowledge/

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MESH_CUI

LABEL: Coverage indicator

DESCRIPTION: This variable is the medical subject heading (MeSH) concept unique identifier (CUI)

SHORT NAME: MESH_CUI

LONG NAME: MESH_CUI

TYPE: CHAR

LENGTH: 11

SOURCE: CMS (HPMS files)

VALUES: 7-XXX digit alphanumeric (e.g., D003424, M0023901)

COMMENT: This variable is new in 2020 and appears in the Indication-based Formulary file. The description for this value appears in the variable called "DISEASE". Both variables are included in the CMS-created indication-based reference file in HPMS for plan sponsors to use for indication-based drug coverage.

The US National Library of Medicine maintains standardized medical subject headings (MeSH). MeSH is a hierarchically-organized terminology for indexing and cataloging of biomedical information. It is used for the indexing of PubMed and other NLM databases. Additional information is available on the NLM.NIH.gov website https://www.nlm.nih.gov/research/umls/sourcereleasedocs/current/MSH/sourcerepresentation.html

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PLAN_ID

LABEL: Part D Plan Benefit Package Identifier

DESCRIPTION: This variable is the unique plan benefit package (PBP) number for the Part D plan sponsor's contract. CMS assigns an identifier to each PBP within a contract that a Part D plan sponsor has with CMS. This field is a key that links of Part D sponsor's contract and plan identifiers.

SHORT NAME: —

LONG NAME: PLAN_ID

TYPE: CHAR

LENGTH: 3

SOURCE: CMS (HPMS files)

VALUES: 3-digit numeric value

COMMENT: Prior to 2015, this variable was always encrypted to comply with CMS privacy rules. You need to know both the Part D contract number (variable called CONTRACT_ID) and plan benefit package identifier in order to identify the specific plan benefit package offered to beneficiaries. The CCW constructs the Plan Characteristics file from information submitted by Part D plan sponsors to CMS's Health Plan Management System (HPMS).

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PRIOR_AUTHORIZATION_YN

LABEL: Prior Authorization Indicator

DESCRIPTION: This is a CCW-derived field that indicates whether the prescription was subject to prior authorization, according to the benefit structure and formulary for the beneficiary's plan.

SHORT NAME: —

LONG NAME: PRIOR_AUTHORIZATION_YN

TYPE: CHAR

LENGTH: 2

SOURCE: CMS (HPMS files)

VALUES: 0 = No
1 = Yes

COMMENT: Part D plan sponsors submit the pricing, tiers, and formularies for their plan benefit packages to CMS via the Health Plan Management System (HPMS). This includes information on which drugs are subject to prior authorization, which means that a physician must get the plan's approval in advance before prescribing the drug. The value of this field may not exactly represent the beneficiary experience at the time of the prescription fill (e.g., no data are collected at the time of the transaction to indicate the actual beneficiary experience). For 2006–2009 this variable was found in the Event Characteristics files (BP_UM_TIER_YYYY_MM). This variable is first available in the Formulary file in 2010.

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QUANTITY_LIMIT_YN

LABEL: Quantity Limit Indicator

DESCRIPTION: This is a CCW-derived field that indicates whether the prescription was subject to quantity limits, according to the benefit structure and formulary for the beneficiary's plan.

SHORT NAME: —

LONG NAME: QUANTITY_LIMIT_YN

TYPE: CHAR

LENGTH: 2

SOURCE: CMS (HPMS Files)

VALUES: 0 = No
1 = Yes

COMMENT: For 2006–2009 this variable was found in the Event Characteristics files (BP_UM_TIER_YYYY_MM).This variable is first available in the Formulary file in 2010.

Part D plan sponsors submit the pricing, tiers, and formularies for their plan benefit packages to CMS via the Health Plan Management System (HPMS). This includes information on which drugs are subject to quantity limits, which restrict the amount that a beneficiary may receive within a certain time period. The value of this field may not exactly represent the beneficiary experience at the time of the prescription fill (e.g., no data are collected at the time of the transaction to indicate the actual beneficiary experience).

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SEGMENT_ID

LABEL: Market Segment Identifier

DESCRIPTION: This variable is the identifier for the geographic market segment covered by the plan.

TYPE: CHAR

LENGTH: 3

SOURCE: CMS (HPMS files)

VALUES: 3-digit number

COMMENT: You need to know both the contract number and plan benefit package identification number (variables called CONTRACT_ID and PLAN_ID) in order to identify the specific plan benefit package offered to beneficiaries in the particular market segments.

The CCW constructs the Plan Characteristics file from information submitted by plan sponsors to CMS's Health Plan Management System (HPMS).

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STEP

LABEL: Step Number

DESCRIPTION: This is a CCW-derived field that indicates whether the prescription was subject to a step therapy protocol, according to the benefit structure and formulary for the beneficiary's plan. If a product is part of two different step therapy protocols, this field is populated with the maximum step value for the product.

If the value is greater than 1, then the beneficiary's plan imposed some type of step therapy requirement, and the value indicates the number of steps or therapy trials needed before becoming eligible for the current drug.

SHORT NAME: —

LONG NAME: STEP

TYPE: CHAR

LENGTH: 2

SOURCE: CMS (HPMS Files)

VALUES: Null (no step requirement), 1-4

COMMENT: Part D plan sponsors submit the pricing, tiers, and formularies for their plan benefit packages to CMS via the Health Plan Management System (HPMS). This includes information on which drugs are subject to step therapy, which requires a beneficiary to first try one or more other medications in the same therapeutic class.

The value of this field may not exactly represent the beneficiary experience at the time of the prescription fill (e.g., no data are collected at the time of the transaction to indicate the actual beneficiary experience).

For 2006–2009 this variable was found in the Part D Event Characteristics files. This variable is first available in the Formulary File in 2010. It is also present in the Excluded Drug file, starting with 2012 data.

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STEP_THERAPY_YN

LABEL: Step Therapy Indicator

DESCRIPTION: This is a CCW-derived field that indicates whether the prescription was subject to a step therapy protocol, according to the benefit structure and formulary for the beneficiary's plan.

SHORT NAME: —

LONG NAME: STEP_THERAPY_YN

TYPE: CHAR

LENGTH: 2

SOURCE: CMS (HPMS Files)

VALUES: 0 = No
1 = Yes

COMMENT: Part D plan sponsors submit the pricing, tiers, and formularies for their plan benefit packages to CMS via the Health Plan Management System (HPMS).

This includes information on which drugs are subject to step therapy, which requires a beneficiary to first try one or more other medications in the same therapeutic class. The value of this field may not exactly represent the beneficiary experience at the time of the prescription fill (e.g., no data are collected at the time of the transaction to indicate the actual beneficiary experience).

This variable is first available in the Formulary Excluded Drug file in 2012.

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STR

LABEL: Drug Strength Description

DESCRIPTION: This variable is the strength or potency of the drug product as dispensed, according to the First DataBank (FDB) reference files. When this variable appears in the Formulary file, it is the FDB drug strength for a drug product on the formulary.

SHORT NAME: STR

LONG NAME: STR

TYPE: CHAR

LENGTH: 10

SOURCE: First DataBank

VALUES: 10-digit alpha/numeric value (e.g., 25MG, 1:10000, or 10MG/100ML)

COMMENT: Description of drug potency may be expressed in units of grams, milligrams, percentage, and other terms. In the Formulary file, this variable is populated by matching the drug products on the Part D Plan submitted formulary to FDB. Part D plan sponsors submit the formulary to the CMS Health Plan Management System (HPMS). Plans identify the drug products on their formularies using the National Library of Medicine RxNorm Concept Unique Identifiers (RXCUIs). Each RXCUI corresponds to a unique brand name and clinical formulation (same ingredients, strength, and dosage form). In the PDE file, this variable is populated by linking to the proprietary First DataBank MedKnowledge database by matching on the National Drug Code (NDC; variable in the PDE files called the product service identifier PROD_SRVC_ID). Additional details regarding the FDB source data are available at: http://www.fdbhealth.com/fdb-medknowledge/

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TIER_ID

LABEL: Tier Number

DESCRIPTION: Medicare Part D formulary tier identifier. This field represents the cost sharing tier in which the drug product was placed in the sponsor's formulary. This identifier is also a key that links a Part D sponsor's cost sharing tier record in the Plan Characteristics File to a prescription drug event record (i.e., the PDE data) using contract ID, plan ID, and tier ID.

SHORT NAME: —

LONG NAME: TIER_ID

TYPE: CHAR

LENGTH: 2

SOURCE: CMS (HPMS Files)

VALUES: 01–09

COMMENT: For 2006–2009 this variable was found in the Part D Event Characteristics files. This variable is first available in the Formulary file in 2010. It is also present in the Excluded Drug file, starting with 2012 data. It can be joined to PDE using the combination of the plan's formulary ID (variable called FORMULARY_ID) and the CCW formulary drug identifier (variable called FORMULARY_RX_ID) to determine the placement of a particular PDE on the formulary (according to plan design). The value of this field may not exactly represent the beneficiary experience at the time of the prescription fill (e.g., no data are collected at the time of the transaction to indicate the actual beneficiary experience). The maximum number of tiers varied by year. The largest number of tiers was 9 (in 2007). From 2011–2020, only up to six tiers are possible; starting in 2021 plans are allowed to have up to seven tiers. The CCW constructs the Plan Characteristics file from information submitted by Part D plan sponsors to CMS's Health Plan Management System (HPMS).

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TYPE

LABEL: Insulin Type as Defined by the Model

DESCRIPTION: Insulin Type as Defined by the Model

TYPE: CHAR

LENGTH: 50

SOURCE: CMS (HPMS files)

VALUES:
COMBINATION
CONCENTRATE
INTERMEDIATE-ACTING
LONG-ACTING
MIX
RAPID_ACTING
SHORT_ACTING

COMMENT: The PDSS model file was new in 2021. The type of drug for each insulin national drug code (NDC) was documented by CMS in the NDC List for the model drugs. Additional details are on the CMS website; reference the Innovation Center webpage for the Part D Senior Savings Program.

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