Medicare Fee-For Service Provider Utilization & Payment Data Part D Prescriber Public Use File: A Methodological Overview

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1. Background

In an effort to make our healthcare system more transparent, affordable, and accountable, the Centers for Medicare & Medicaid Services (CMS) has prepared a public dataset, the Part D Prescriber Public Use File (herein referred to as the "Part D Prescriber PUF"), with information on prescription drug events (PDEs) incurred by Medicare beneficiaries with a Part D prescription drug plan. The Part D Prescriber PUF is organized by National Provider Identifier (NPI) and drug name and contains information on drug utilization (claim counts and day supply) and total drug costs. The data in the Part D Prescriber PUF cover calendar years 2013 through 2015.

2. Key data sources

The primary data source for these data is the CMS Chronic Conditions Data Warehouse, which contains Medicare Part D PDE records received through the claims submission cut-off date. The submission cut-off date is June 30th following the end of the preceding calendar year. For instance, the 2015 Part D Prescriber PUF includes PDEs received through June 30, 2016. These data contain 100 percent of Medicare Part D final-action (i.e., all claim adjustments received through the cut-off date have been resolved) PDE records for beneficiaries who are enrolled in the Part D program. Beneficiary counts, claim counts, and total drug costs are summarized from these PDE data. PDE records for over-the-counter drugs (indicated by drug coverage status code = "O"), which may be found in the PDE data due to their inclusion in an approved step-therapy protocols, are excluded from all summarizations. Drug brand names and generic names used in the summarization are obtained by linking the National Drug Codes (NDCs) from PDE records to a commercially available drug information database. A small proportion of PDE records with NDCs that do not match to the drug information database are excluded from all summarizations.

Prescriber demographics are also incorporated in the Part D Prescriber PUF and include name, credentials, gender, complete address, and entity type from the National Plan & Provider Enumeration System (NPPES). The health care provider's demographic information is collected at the time of enrollment and updated periodically. The demographic information provided in the Part D Prescriber PUF is based upon information extracted from NPPES as of the end of the subsequent calendar year (e.g., The 2015 Part D Prescriber PUF includes NPPES information as of the end of calendar year 2016). For additional information on NPPES, please visit https://nppes.cms.hhs.gov/NPPES/Welcome.do.

3. Population

The Part D Prescriber PUF is based on beneficiaries enrolled in the Medicare Part D prescription drug program who comprise approximately 70 percent of all Medicare beneficiaries. Approximately two-thirds of Part D beneficiaries are enrolled in stand-alone Prescription Drug Plans (PDP) with the remaining one third enrolled in Medicare Advantage Prescription Drug (MAPD) plans.

The Part D Prescriber PUF is restricted to prescribers who had a valid NPI and who were included on Medicare Part D PDEs submitted by the Part D plan sponsors during the calendar year. The dataset contains information predominantly from individual providers, but also includes a small proportion of organizational providers, such as nursing homes, group practices, non-physician practitioners, residential treatment facilities, ambulatory surgery centers, and other providers.

4. Aggregation

The spending and utilization data in the Part D Prescriber PUF are aggregated to the following:

a) the NPI of the prescriber, and
b) the drug name (brand name in the case of trademarked drugs) and generic name.

Each record in the dataset represents a distinct combination of NPI, drug (brand) name, and generic name. There can be multiple records for a given NPI based on the number of distinct drugs that were filled. For each prescriber and drug, the dataset includes the total number of prescriptions that were dispensed (including original prescriptions and any refills), total 30-day standardized fill counts, total day's supply for these prescriptions, and the total drug cost. To protect the privacy of Medicare beneficiaries, any aggregated records which are derived from 10 or fewer claims are excluded from the Part D Prescriber PUF. Please see the section on Limitations for additional information about data redactions and suppression in the Part D Prescriber PUF.

5. Data Contents

5.1 Detailed Data File

Providers with fewer than 11 claims are not included in the data file. The following variables are included in the Part D Prescriber PUF detail data file:

npi – National Provider Identifier (NPI) for the performing provider on the claim.

nppes_provider_last_org_name – When the provider is registered in NPPES as an individual (*entity_type_code* = "I"), this is the provider's last name. When the provider is registered as an organization (*nppes_entity_code* = "O"), this is the organization name.

nppes_provider_first_name – When the provider is registered in NPPES as an individual (*nppes_entity_code* = "I"), this is the provider's first name. When the provider is registered as an organization (*nppes_entity_code* = "O"), this will be blank.

nppes_provider_city – The city where the provider is located, as reported in NPPES.

nppes_provider_state – The state where the provider is located, as reported in NPPES. The fifty U.S. states and the District of Columbia are reported by the state postal abbreviation. The following values are used for other areas:

"XX" = "Unknown"
"AA" = "Armed Forces Central/South America"
"AE" = "Armed Forces Europe"
"AP" = "Armed Forces Pacific"
"AS" = "American Samoa"
"GU" = "Guam"
"MP" = "Northern Mariana Islands"
"PR" = "Puerto Rico"
"VI" = "Virgin Islands"
"ZZ" = "Foreign Country"

specialty_description – Derived from the Medicare provider/supplier specialty code reported on the NPI's Part B claims. For providers that have more than one Medicare specialty code reported on their claims, the Medicare specialty code associated with the largest number of services is reported. Where a prescriber's NPI did not have associated Part B claims, the taxonomy code associated with the NPI in NPPES is mapped to a Medicare specialty code using an external crosswalk published here: http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/MedicareProviderSupEnroll/Taxonomy.html. For any taxonomy codes that could not be mapped to a Medicare specialty code, the taxonomy classification description from the National Uniform Claim Committee (NUCC) taxonomy code set is used. For more information on the NUCC taxonomy code set, please visit: http://www.nucc.org/index.php?option=com_content&view=article&id=107&Itemid=132.

description_flag – A flag that indicates the source of the *specialty_description*.
"S" = Medicare Specialty Code description
"T" = Taxonomy Code Classification description.

drug_name – The name of the drug filled. This includes both brand names (drugs that have a trademarked name) and generic names (drugs that do not have a trademarked name).

generic_name – A term referring to the chemical ingredient of a drug rather than the trademarked brand name under which the drug is sold.

bene_count – The total number of unique Medicare Part D beneficiaries with at least one claim for the drug. Counts fewer than 11 are suppressed and are indicated by a blank.

total_claim_count – The number of Medicare Part D claims. This includes original prescriptions and refills. Aggregated records based on *total_claim_count* fewer than 11 are not included in the data file.

total_30_day_fill_count – The aggregate number of Medicare Part D standardized 30-day fills. The standardized 30-day fill is derived from the number of days supplied on each Part D claim divided by 30. Standardized 30-day fill values less than 1.0 were bottom-coded with a value of 1.0 and standardized 30-day fill values greater than 12.0 were top-coded with a value of 12.0.

total_day_supply – The aggregate number of day's supply for which this drug was dispensed.

total_drug_cost – The aggregate drug cost paid for all associated claims. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers.

bene_count_ge65 – The total number of unique Medicare Part D beneficiaries age 65 and older with at least one claim for the drug. A blank indicates the value is suppressed. See *bene_count_ge65_suppress_flag* regarding suppression of data.

bene_count_ge65_suppress_flag – A flag indicating the reason the *bene_count_ge65* variable is suppressed.

"*" = Primary suppressed due to *bene_count_ge65* between 1 and 10.

"#" = Counter suppressed because the "less than 65 year old" group (not explicitly displayed) contains a beneficiary count between 1 and 10, which can be mathematically determined from *bene_count_ge65* and *bene_count*.

total_claim_count_ge65 – The number of Medicare Part D claims for beneficiaries age 65 and older. This includes original prescriptions and refills. A blank indicates the value is suppressed. See *ge65_suppress_flag* regarding suppression of data.

ge65_suppress_flag – A flag that indicates the reason the *total_claim_count_ge65, total_30_day_fill_count ge65, total_day_supply_ge65*, and *total_drug_cost_ge65* variables are suppressed.

"*" = Primary suppressed due to *total_claim_count_ge65* between 1 and 10.

"#" = Counter suppressed because the "less than 65 year old" group (not explicitly displayed) contains a small claim count between 1 and 10, which can be mathematically determined from the *total_claim_count_ge65* and *total_claim_count*.

total_30_day_fill_count_ge65 – The number of Medicare Part D standardized 30-day fills for beneficiaries age 65 and older. The standardized 30-day fill is derived from the number of days supplied on each Part D claim divided by 30. Standardized 30-day fill values less than 1.0 were bottom-coded with a value of 1.0 and standardized 30-day fill values greater than 12.0 were top-coded with a value of 12.0. If *total_claim_count_ge65* is suppressed, this variable is suppressed. A blank indicates the value is suppressed. See *ge65_suppress_flag* regarding suppression of data.

total_day_supply_ge65 – The aggregate number of day's supply for which this drug was dispensed, for beneficiaries age 65 and older. If *total_claim_count_ge65* is suppressed, this variable is suppressed. A blank indicates the value is suppressed. See *ge65_suppress_flag* regarding suppression of data.

total_drug_cost_ge65 – The aggregate total drug cost paid for all associated claims for beneficiaries age 65 and older. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. If *total_claim_count_ge65* is suppressed, this

variable is suppressed. A blank indicates the value is suppressed. See *ge65_suppress_flag* regarding suppression of data.

5.2 Summary Tables

Two summary type tables have been created to supplement the information reported in the Part D Prescriber PUF detail data described above: 1) aggregated information at the prescriber-level (i.e. one summary record per NPI) that includes enhanced prescriber demographic information beyond what is provided in the Part D Prescriber PUF detail data; and 2) aggregated drug information at the State/National, brand name and generic name level. The aggregated summary tables are not restricted to the redacted data reported in the Part D Prescriber PUF, but are aggregated based on all Medicare Part D PDE data.

Part D Prescriber Summary Table

The "Part D Prescriber Summary Table" contains overall drug utilization (claims, 30-day standardized fill counts and day's supply), drug costs, and beneficiary counts organized by NPI. Drug utilization, drug costs, and beneficiary counts are also included for each of the following sub group classifications:

- Beneficiaries age 65 and older;
- Brand drugs, generic drugs, and other drugs;
- Medicare Advantage Prescription Drug (MAPD) and stand-alone Prescription Drug Plans (PDP);
- Low-income subsidy (LIS) and no low-income subsidy (nonLIS); and
- Opioids, antibiotics, high-risk medications in the elderly, and antipsychotics in the elderly.

In addition, beneficiary demographic and health characteristics are provided which include age, sex, race, Medicare and Medicaid entitlement and risk scores.

The following variables correspond to the same variables reported in the Part D Prescriber PUF detail data. See "5.1 Detailed Data File" section above for descriptions:

npi
nppes_provider_last_org_name
nppes_provider_first_name
nppes_provider_city
nppes_provider_state
specialty_description
description_flag
total_claim_count
total_30_day_fill_count
total_drug_cost
total_day_supply
bene_count

ge65_suppress_flag
total_claim_count_ge65
total_30_day_fill_count_ge65
total_drug_cost_ge65
total_day_supply_ge65
bene_count_ge65_suppress_flag
bene_count_ge65

The following variables are specific to the "Part D Prescriber Summary Table":

nppes_provider_mi – When the provider is registered in NPPES as an individual (*nppes_entity_code* = "I"), this is the provider's middle initial. When the provider is registered as an organization (*nppes_entity_code* = "O"), this will be blank.

nppes_credentials – When the provider is registered in NPPES as an individual (*nppes_entity_code* = "I"), these are the provider's credentials. When the provider is registered as an organization (*nppes_entity_code* = "O"), this will be blank.

nppes_provider_gender – When the provider is registered in NPPES as an individual (*nppes_entity_code* = "I"), this is the provider's gender. A value of "M" indicates male and a value of "F" indicates females. When the provider is registered as an organization (*nppes_entity_code* = "O"), this will be blank.

nppes_entity_code – Type of entity reported in NPPES. An entity code of "I" identifies providers registered as individuals and an entity type code of "O" identifies providers registered as organizations.

nppes_provider_street1 – The first line of the provider's street address, as reported in NPPES.

nppes_provider_street2 – The second line of the provider's street address, as reported in NPPES.

nppes_provider_zip5 – The first 5 digits of the provider's ZIP code, as reported in NPPES.

nppes_provider_zip4 – The 6th through 9th digits of the provider's ZIP code, as reported in NPPES.

nppes_provider_country – The country where the provider is located, as reported in NPPES. The country code will be "US" for any state or U.S. territory. For foreign countries (i.e., nppes_provider_state = "ZZ"), the provider country values may include the following:

"AE" = "United Arab Emirates"	"IS" = "Iceland"
"AI" = "Anguilla"	"IT" = "Italy"
"AR" = "Argentina"	"JO" = "Jordan"
"AU" = "Australia"	"JP" = "Japan"
"BH" = "Bahrain"	"KR" = "Korea"
"BM" = "Bermuda"	"KW" = "Kuwait"
"BR" = "Brazil"	"KY" = "Cayman Islands"
"CA" = "Canada"	"LY" = "Libya"

"CH" = "Switzerland"
"CN" = "China"
"CO" = "Colombia"
"DE" = "Germany"
"EC" = "Ecuador"
"EG" = "Egypt"
"ES" = "Spain"
"FR" = "France"
"GB" = "Great Britain"
"GR" = "Greece"
"HU" = "Hungary"
"IE" = "Ireland"
"IL" = "Israel"
"IN" = "India"
"IQ" = "Iraq"
"MG" = "Madagascar"
"MX" = "Mexico"
"NL" = "Netherlands"
"NO" = "Norway"
"NZ" = "New Zealand"
"OM" = "Oman"
"PA" = "Panama"
"PK"= "Pakistan"
"SA"= "Saudi Arabia"
"SE"= "Sweden"
"TH" = "Thailand"
"TR"= "Turkey"
"UG" = "Uganda"
"VE" = "Venezuela"
"ZA" = "South Africa"

medicare_prvdr_enroll_status – A status to indicate whether the prescriber is enrolled in the Medicare Program.

"E" = Providers who are enrolled in the Medicare Program as of end of the data reporting year.

"N" = Providers who are not enrolled in the Medicare Program as of the end of the data reporting year.

"O" = Providers who did not wish to enroll in the Medicare program as of end of the data reporting year but have signed a written affidavit to opt out that states neither the provider nor the beneficiary can receive payment from Medicare for services performed.

brand_suppress_flag – A flag indicating the reason the *brand_claim_count* and *brand_drug_cost* variables are suppressed.

"*" = Primary suppressed due to *brand_claim_count* between 1 and 10.

"#" = Counter suppressed because the claim count from at least one of the corresponding claim count categories (*generic_claim_count* or *other_claim_count*) is between 1 and 10. Counter suppression prevents the disclosure of a primary suppressed value when all categories sum to the total value.

brand_claim_count – Total claims of brand-name drugs, including refills. A drug is classified as "brand" using the Food and Drug Administration (FDA) approval category of New Drug Application (NDA), NDA authorized generic, or Biologic License Application (BLA). A blank indicates the value is suppressed. See *brand_suppress_flag* regarding suppression of data.

brand_drug_cost – Aggregate drug cost paid for brand-name drugs. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. A drug is classified as "brand" using the FDA approval category of NDA, NDA authorized generic, or BLA. If *brand_claim_count* is suppressed this variable is suppressed. A blank indicates the value is suppressed. See *brand_suppress_flag* regarding suppression of data.

generic_suppress_flag – A flag indicating the reason the *generic_claim_count* and *generic_drug_cost* variables are suppressed.

"*" = Primary suppressed due to *generic_claim_count* between 1 and 10.

"#" = Counter suppressed because the claim count from at least one of the corresponding claim count categories (*brand_claim_count* or *other_claim_count*) is between 1 and 10. Counter suppression prevents the disclosure of a primary suppressed value when all categories sum to the total value.

generic_claim_count – Total claims of generic drugs, including refills. A drug is classified as "generic" using the FDA approval category of Abbreviated New Drug Application (ANDA). A blank indicates the value is suppressed. See *generic_suppress_flag* regarding suppression of data.

generic_drug_cost – Aggregate cost paid for generic drugs. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. A drug is classified as "generic" using the FDA approval category of ANDA. If *generic_claim_count* is suppressed this variable is suppressed. A blank indicates the value is suppressed. See *generic_suppress_flag* regarding suppression of data.

other_suppress_flag – A flag indicating the reason *other_claim_count* and *other_drug_cost* variables are suppressed.

"*" = Primary suppressed due to *other_claim_count* between 1 and 10.

"#" = Counter suppressed because the claim count from at least one of the corresponding claim count categories (*brand_claim_count* or *generic_claim_count*) is between 1 and 10. Counter suppression prevents the disclosure of a primary suppressed value when all categories sum to the total value.

other_claim_count – Total claims of other drugs, including refills. A drug is classified as "other" using any FDA approval categories not included in the brand or generic definitions above. A blank indicates the value is suppressed. See *other_suppress_flag* regarding suppression of data.

other_drug_cost – Aggregate cost paid for all other drugs not classified as brand or generic. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. A drug is classified as "other" using any FDA approval categories not included in the brand or generic definitions above. If *other_claim_count* is suppressed this variable is suppressed. A blank indicates the value is suppressed. See *other_suppress_flag* regarding suppression of data.

mapd_suppress_flag – A flag indicating the reason the *mapd_claim_count* and *mapd_drug_cost* variables are suppressed.

"*" = Primary suppressed due to *mapd_claim_count* between 1 and 10.

"#" = Counter suppressed because the *pdp_claim_count* contains a claim count between 1 and 10, which can be mathematically determined from the *mapd_claim_count* and *total_claim_count*.

mapd_claim_count – The number of claims for beneficiaries covered by MAPD plans. A blank indicates the value is suppressed. See *mapd_suppress_flag* regarding suppression of data.

mapd_drug_cost – Aggregate cost paid for claims filled by beneficiaries in MAPD plans. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. If *mapd_claim_count* is suppressed this variable is suppressed. A blank indicates the value is suppressed. See *mapd_suppress_flag* regarding suppression of data.

pdp_suppress_flag – A flag indicating the reason the *pdp_claim_count* and *pdp_drug_cost* variables are suppressed.

"*" = Primary suppressed due to *pdp_claim_count* between 1 and 10.

"#" = Counter suppressed because the *mapd_claim_count* contains a claim count between 1 and 10, which can be mathematically determined from the *pdp_claim_count* and *total_claim_count*.

pdp_claim_count – The number of claims for beneficiaries covered by standalone PDPs. A blank indicates the value is suppressed. See *pdp_suppress_flag* regarding suppression of data.

pdp_drug_cost – Aggregate drug cost paid for claims filled by beneficiaries in standalone PDPs. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. If *pdp_claim_count* is suppressed this variable is suppressed. A blank indicates the value is suppressed. See *pdp_suppress_flag* regarding suppression of data.

lis_suppress_flag – A flag indicating the reason the *lis_claim_count* and *lis_drug_cost* variables are suppressed.

"*" = Primary suppressed due to *lis_claim_count* between 1 and 10.

"#" = Counter suppressed because *nonlis_claim_count* contains a claim count between 1 and 10, which can be mathematically determined from the *lis_claim_count* and *total_claim_count*.

lis_claim_count – Total number of claims from this prescriber, including refills, for beneficiaries with a Part D low-income subsidy. A blank indicates the value is suppressed. See *lis_suppress_flag* regarding suppression of data.

lis_drug_cost – Aggregate drug cost paid for claims for beneficiaries with a Part D low-income subsidy. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. If *lis_claim_count* is suppressed this variable is

suppressed. A blank indicates the value is suppressed. See *lis_suppress_flag* regarding suppression of data.

nonlis_suppress_flag – A flag indicating the reason the *nonlis_claim_count* and *nonlis_drug_cost* variables are suppressed.

"*" = Primary suppressed due to *nonlis_claim_count* between 1 and 10.

"#" = Counter suppressed because *lis_claim_count* contains a claim count between 1 and 10, which can be mathematically determined from the *nonlis_claim_count* and *total_claim_count*.

nonlis_claim_count – Total number of claims from this prescriber, including refills, for beneficiaries without a Part D low-income subsidy. A blank indicates the value is suppressed. See *nonlis_suppress_flag* regarding suppression of data.

nonlis_drug_cost – Aggregate drug cost paid for claims for beneficiaries without a Part D low-income subsidy. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. If *nonlis_claim_count* is suppressed this variable is suppressed. A blank indicates the value is suppressed. See *nonlis_suppress_flag* regarding suppression of data.

opioid_claim_count – Total claims of opioid drugs, including refills. The *opioid_claim_count* is suppressed when *opioid_claim_count* is between 1 and 10. A blank indicates the value is suppressed. For a list of drug names that include opioids, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

opioid_drug_cost – Aggregate cost paid for opioid drugs. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. If *opioid_claim_count* is suppressed this variable is suppressed. A blank indicates the value is suppressed. For a list of drug names that include opioids, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

opioid_day_supply – The aggregate number of day's supply for opioid drugs. If *opioid_claim_count* is suppressed this variable is suppressed. A blank indicates the value is suppressed. For a list of drug names that include opioids, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

opioid_bene_count – The total number of unique Medicare Part D beneficiaries with at least one opioid claim. The *opioid_bene_count* is suppressed when *opioid_bene_count* is between 1 and 10. A blank indicates the value is suppressed. For a list of drug names that include opioids, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

opioid_prescriber_rate – The percent of the *total_claim_count* represented by the *opioid_claim_count*. If *opioid_claim_count* is suppressed this variable is suppressed. A blank indicates the value is suppressed. For a list of drug names that include opioids, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

antibiotic_claim_count – Total claims of antibiotic drugs, including refills. The *antibiotic_claim_count* is suppressed when *antibiotic_claim_count* is between 1 and 10. A blank indicates the value is suppressed. For a list of drug names that include antibiotics, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

antibiotic_drug_cost – Aggregate cost paid for antibiotic drugs. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. If *antibiotic_claim_count* is suppressed this variable is suppressed. A blank indicates the value is suppressed. For a list of drug names that include antibiotics, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

antibiotic_bene_count – The total number of unique Medicare Part D beneficiaries with at least one antibiotic claim. The *antibiotic_bene_count* is suppressed when *antibiotic_bene_count* is between 1 and 10. A blank indicates the value is suppressed. For a list of drug names that include antibiotics, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

hrm_ge65_suppress_flag – A flag indicating the reason the *hrm_claim_count_ge65* and *hrm_drug_cost_ge65* variables are suppressed. For a list of drug names that include high-risk medication in the elderly, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

"*" = Primary suppressed due to *hrm_claim_count_ge65* between 1 and 10.
"#" = Counter suppressed because total_claim_count_ge65 is suppressed. See ge65_suppress_flag regarding suppression of total_claim_count_ge65.

hrm_claim_count_ge65 – Total claims of high-risk medication drugs, including refills, for beneficiaries age 65 and older. A blank indicates the value is suppressed. See *hrm_ge65_suppress_flag* regarding suppression of data. For a list of drug names that include high-risk medication in the elderly, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

hrm_drug_cost_ge65 – Aggregate cost paid for high-risk medication drugs for beneficiaries age 65 and older. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. If *hrm_claim_count_ge65* is suppressed this variable is suppressed. A blank indicates the value is suppressed. See *hrm_ge65_suppress_flag* regarding suppression of data. For a list of drug names that include high-risk medication in the elderly, see the

"Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

hrm_bene_ge65_suppress_flag – A flag indicating the reason the *hrm_bene_count_ge65* variable is suppressed. For a list of drug names that include high-risk medication in the elderly, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

"*" = Primary suppressed due to *hrm_bene_count_ge65* counts between 1 and 10.

"#" = Counter suppressed because the *bene_count_ge65* is suppressed. See *bene_count_ge65_suppress_flag* regarding suppression of *bene_count_ge65*.

hrm_bene_count_ge65 – The total number of unique Medicare Part D beneficiaries age 65 and older with at least one high-risk medication claim. A blank indicates the value is suppressed. See *hrm_bene_ge65_suppress_flag* regarding suppression of data. For a list of drug names that include high-risk medication in the elderly, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

antipsych_ge65_suppress_flag – A flag indicating the reason the *antipsych_claim_count_ge65* and *antipsych_drug_cost_ge65* variables are suppressed. For a list of drug names that include antipsychotics in the elderly, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

"*" = Primary suppressed due to *antipsych_claim_count_ge65* between 1 and 10.

"#" = Counter suppressed because *total_claim_count_ge65* is suppressed. See *ge65_suppress_flag* regarding suppression of *total_claim_count_ge65*.

antipsych_claim_count_ge65 – Total claims of antipsychotic drugs, including refills, for beneficiaries age 65 and older. A blank indicates the value is suppressed. See *antipsych_ge65_suppress_flag* regarding suppression of data. For a list of drug names that include antipsychotics in the elderly, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

antipsych_drug_cost_ge65 – Aggregate cost paid for antipsychotic drugs for beneficiaries age 65 and older. This amount includes ingredient cost, dispensing fee, sales tax, and any applicable vaccine administration fees and is based on the amounts paid by the Part D plan, Medicare beneficiary, government subsidies, and any other third-party payers. If *antipsych_claim_count_ge65* is suppressed this variable is suppressed. A blank indicates the value is suppressed. See *antipsych_ge65_suppress_flag* regarding suppression of data. For a list of drug names that include antipsychotics in the elderly, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

antipsych_bene_ge65_suppress_flag – A flag indicating the reason the *antipsych_bene_count_ge65* variable is suppressed. For a list of drug names that include antipsychotics in the elderly, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

"*" = Primary suppressed due to *antipsych_bene_count_ge65* counts between 1 and 10.

"#" = Counter suppressed because the *bene_count_ge65* is suppressed. See *bene_count_ge65_suppress_flag* regarding suppression of *bene_count_ge65*.

antipsych_bene_count_ge65 – The total number of unique Medicare Part D beneficiaries age 65 and older with at least one antipsychotic claim. A blank indicates the value is suppressed. See *antipsych_bene_ge65_suppress_flag* regarding suppression of data. For a list of drug names that include antipsychotics in the elderly, see the "Drug Category Lists" available within the "NPI Summary Table" Section of each calendar year's web page.

average_age_of_beneficiaries – Average age of beneficiaries. Beneficiary age is calculated at the end of the calendar year or at the time of death. The *average_age_of_beneficiaries* is suppressed when *bene_count* is between 1 and 10. A blank indicates the value is suppressed.

beneficiary_age_less_65_count – Number of beneficiaries under the age of 65. Beneficiary age is calculated at the end of the calendar year or at the time of death. The *beneficiary_age_less_65_count* is suppressed when *beneficiary_age_less_65_count* is between 1 and 10 and may be counter suppressed when a count in one of the other age categories is suppressed or when the *bene_count_ge65* is suppressed. A blank indicates the value is suppressed.

beneficiary_age_65_74_count – Number of beneficiaries between the ages of 65 and 74. Beneficiary age is calculated at the end of the calendar year or at the time of death. The *beneficiary_age_65_74_count* is suppressed when the *beneficiary_age_65_74_count* is between 1 and 10 and may be counter suppressed when a count in one of the other age categories is suppressed or when the *bene_count_ge65* is suppressed. A blank indicates the value is suppressed.

beneficiary_age_75_84_count – Number of beneficiaries between the ages of 75 and 84. Beneficiary age is calculated at the end of the calendar year or at the time of death. The *beneficiary_age_75_84_count* is suppressed when *beneficiary_age_75_84_count* is between 1 and 10 and may be counter suppressed when a count in one of the other age categories is suppressed or when the *bene_count_ge65* is suppressed. A blank indicates the value is suppressed.

beneficiary_age_greater_84_count – Number of beneficiaries over the age of 84. Beneficiary age is calculated at the end of the calendar year or at the time of death. The *beneficiary_age_greater_84_count* is suppressed when *beneficiary_age_greater_84_count* is between 1 and 10 and may be counter suppressed when a count in one of the other age categories is suppressed or when the *bene_count_ge65* is suppressed. A blank indicates the value is suppressed.

beneficiary_female_count – Number of female beneficiaries. The *beneficiary_female_count* is suppressed when *beneficiary_female_count* is between 1 and 10 and counter suppressed when *beneficiary_male_count* is between 1 and 10. A blank indicates the value is suppressed.

beneficiary_male_count – Number of male beneficiaries. The *beneficiary_male_count* is suppressed when *beneficiary_male_count* is between 1 and 10 and counter suppressed when *beneficiary_female_count* is between 1 and 10. A blank indicates the value is suppressed.

beneficiary_race_white_count[1] – Number of non-Hispanic white beneficiaries. The *beneficiary_race_white_count* is suppressed when *beneficiary_race_white_count* is between 1 and 10 and may be counter suppressed when a count in one of the other race categories is suppressed. A blank indicates the value is suppressed.

beneficiary_race_black_count[1] – Number of non-Hispanic black or African American beneficiaries. The *beneficiary_race_black_count* is suppressed when *beneficiary_race_black_count* is between 1 and 10 and may be counter suppressed when a count in one of the other race categories is suppressed. A blank indicates the value is suppressed.

beneficiary_race_asian_pi_count[1] – Number of Asian or Pacific Islander beneficiaries. The *beneficiary_race_asian_pi_count* is suppressed when *beneficiary_race_asian_pi_count* is between 1 and 10 and may be counter suppressed when a count in one of the other race categories is suppressed. A blank indicates the value is suppressed.

beneficiary_race_hispanic_count[1] – Number of Hispanic beneficiaries. The *beneficiary_race_hispanic_count* is suppressed when *beneficiary_race_hispanic_count* is between 1 and 10 and may be counter suppressed when a count in one of the other race categories is suppressed. A blank indicates the value is suppressed.

beneficiary_race_nat_ind_count[1] – Number of American Indian or Alaska Native beneficiaries. The *beneficiary_race_nat_ind_count* is suppressed when *beneficiary_race_nat_ind_count* is between 1 and 10 and may be counter suppressed when a count in one of the other race categories is suppressed. A blank indicates the value is suppressed.

beneficiary_race_other_count[1] – Number of beneficiaries with race not elsewhere classified. The *beneficiary_race_other_count* is suppressed when *beneficiary_race_other_count* is between 1 and 10 and may be counter suppressed when a count in one of the other race categories is suppressed. A blank indicates the value is suppressed.

beneficiary_nondual_count – Number of Medicare beneficiaries qualified to receive Medicare only benefits. Beneficiaries are classified as Medicare only entitlement if they received zero months of any Medicaid benefits (full or partial) in the given calendar year. The *beneficiary_nondual_count* is suppressed when *beneficiary_nondual_count* is between 1 and 10 and counter suppressed when *beneficiary_dual_count* is between 1 and 10. A blank indicates the value is suppressed.

beneficiary_dual_count – Number of Medicare beneficiaries qualified to receive Medicare and Medicaid benefits. Beneficiaries are classified as Medicare and Medicaid entitlement if in any month in the given calendar year they were receiving full or partial Medicaid benefits. The *beneficiary_dual_count*

[1] Race/ethnicity information is based on the variable RTI_RACE_CD from the CMS CCW enrollment database. The RTI_RACE_CD variable is based upon a validated algorithm that uses Census surname lists and geography to improve the accuracy of race/ethnicity classification, particularly for those who are Hispanic or Asian/Pacific Islanders.

is suppressed when *beneficiary_dual_count* is between 1 and 10 and counter suppressed when *beneficiary_nondual_count* is between 1 and 10. A blank indicates the value is suppressed.

beneficiary_average_risk_score – Average Hierarchical Condition Category (HCC) risk score of beneficiaries. Please refer to the "Additional Information" section of this document for more details on HCC risk scores. The *beneficiary_average_risk_score* is suppressed when *bene_count* is between 1 and 10. A blank indicates the value is suppressed.

Part D Drug National/State Summary Tables

The "Part D Drug National/State Summary Tables" contain information on number of beneficiaries, number of prescribers, total drug claims, 30-day standardized fill counts and total drug costs for all beneficiaries and for beneficiaries age 65 and older. In addition, flag indicators are included to identify drugs as opioid, antibiotic, high risk medication (HRM) and/or antipsychotic. The data are organized by drug name and generic name in the national table and organized by provider state, drug name, and generic name in the state table.

More detailed information on the Part D Drug National/State Summary tables are provided in the "Methodology" and "Data Dictionary" tabs of each summary file.

6. Data Limitations

Although the Part D Prescriber PUF has a wealth of payment and utilization information about Medicare prescription drug events (PDEs), the dataset also has a number of limitations that are worth noting. First, the information presented in this file does not indicate the quality of care provided by individual clinicians. Second, given that the data contain information only from Medicare beneficiaries with Part D coverage, but clinicians typically treat many other patients who do not have that form of coverage, the data in the Part D Prescriber PUF may not be representative of a prescriber's entire prescribing pattern, nor be fully inclusive of all prescriptions written by the provider. Additionally, the data in this file are limited to medications covered by the Part D program and drugs statutorily excluded by the Part D program, which may be covered by individual Part D prescription drug plans through supplemental coverage. Since not all Part D plans have supplemental coverage for excluded products, utilization, and cost statistics presented in the data likely underestimates the true use of these products in this population.

The total drug costs included in these data reflect the prescription drug costs incurred by Medicare Part D beneficiaries, including costs that are paid by Medicare, by beneficiaries, and by third-party payers. The Part D prescription drug program is administered by private Part D plan insurers. Medicare pays Part D plans a monthly, risk-adjusted capitation payment for each enrollee. Beneficiaries also pay a monthly premium. In addition, Medicare pays Part D plans additional subsidies to cover reduced cost-sharing for low-income beneficiaries and a portion of the costs for beneficiaries whose drug costs are very high.

Following each benefit year, CMS shares risk with plans by reconciling the capitation and various subsidy payments to actual drug cost expenditures determined from PDE records and any manufacturer rebates or other direct and indirect remunerations received by the plan. Therefore, because the drug expenditures derived from the PDE data comprise only a piece of the payment process, it is not possible to directly attribute total drug costs at the prescriber or drug level to payments from the Medicare Trust Fund. Furthermore, these total drug costs do not reflect any manufacture rebates.

Also, there are known issues in the attribution of PDEs to a specific NPI. Some prescribers' claims may be listed under multiple NPIs, such as an organizational and individual NPI. In this case, users cannot determine a prescriber's actual total because it is not possible to identify the individual's portion when the claim is submitted under their organization. In addition, some of an individual's prescriptions might be erroneously attributed to a different prescriber due to errors that can occur in the transcription of prescriber information at the point-of-sale.

If users attempt to link data from these files to other public datasets, please be aware of the particular Medicare populations included and timeframes used in each file that will be merged, as well as the identifiers used to merge data. For example, efforts to link the Part D Prescriber data to the Physician and Other Supplier PUF data would need to account for the fact that some beneficiaries who have fee-for-service (FFS) Part B coverage (and are thus included in the Physician and Other Supplier PUF) do not have Part D drug coverage (and thus not represented in the Part D Prescriber PUF). At the same time, some beneficiaries that have Part D coverage (and are thus included in the Part D Prescriber PUF) do not have FFS Part B coverage (and thus not included in the Physician and Other Supplier PUF). Another example would be linking to data constructed from different or non-aligning time periods, such as publically available data on physician referral patterns, which is based on an 18-month period. Users attempting to merge data from the Part D Prescriber PUF to publicly available Open Payments data on financial relationships should be aware that NPIs are not available in the Open Payments data and thus merges must be conducted using text-string identification fields such as name and address.

Data Redaction and Suppression

As previously stated, the Part D Prescriber PUF detail file does not include drugs with fewer than 11 Part D drug claims, so users should be aware that summing data in detail file will underestimate the true Part D totals. In addition, in the detail file as well as the summary tables, beneficiary counts, claim counts, 30-day fill counts, drug costs, and day's supply are suppressed if the value is between 1 and 10 and also may be removed for counter-suppression purposes. Since total claim counts are available on the files and some subgroups (e.g., brand, generic, and other) sum to the total claim count, if one of the sub-group categories is suppressed because it has a claim count between 1 and 10 (primary suppression), then the next lowest claim count sub-group category must be suppressed to prevent disclosure of this primary suppressed value. Since only one sub-group category is suppressed, you can mathematically determine it using the values from the other claim count categories and the total claim count information. To help users understand the reasons for suppression, suppression flag variables are included.

Suppressed values represent values 1 to 10 and are indicated by a "blank" in the data files. When analyzing the data, users should note that excluding the suppressed values will result in estimates that are different from the true values. If users choose to retain the suppressed values in their analysis, please note that most statistical software packages will treat the "blanks" as "zeroes", resulting in underestimates of the true values. Alternatively, users may assign an imputed value of their choosing, e.g. five (5), for the suppressed value.

7. Additional Information

Other Data Sources: CMS also releases the "Medicare Fee-For-Service Public Provider Enrollment Data" that include provider name and address information from the Provider Enrollment and Chain Ownership System (PECOS). These data are updated on a quarterly basis and are available at data.cms.gov.

HCCs (hierarchical condition categories): CMS developed a risk-adjustment model that uses HCCs (hierarchical condition categories) to assign risk scores. Those scores estimate how beneficiaries' FFS spending will compare to the overall average for the entire Medicare population. The average risk score is set at 1.08; beneficiaries with scores greater than that are expected to have above-average spending, and vice versa. Risk scores are based on a beneficiary's age and sex; whether the beneficiary is eligible for Medicaid, first qualified for Medicare on the basis of disability, or lives in an institution (usually a nursing home); and the beneficiary's diagnoses from the previous year.

The HCC model was designed for risk adjustment on larger populations, such as the enrollees in a Medicare Advantage plan, and generates more accurate results when used to compare groups of beneficiaries rather than individuals. For more information on the HCC risk score, see: https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Risk-Adjustors.html.

8. Updates

May 2017 Updates

The "Part D Prescriber PUF" has been updated to include a 30-day standardized fill count for all beneficiaries and for beneficiaries age 65 and older.

The "Part D Prescriber Summary Table" has been updated to include aggregated demographic and health information associated with providers' beneficiary panels. This provider-level summary now includes aggregated information on beneficiary age, sex, race, Medicare and Medicaid entitlement, and average beneficiary risk scores. The summary has also been updated to include an opioid prescriber rate, a 30-day standardized fill count for all beneficiaries and for beneficiaries age 65 and older. The antipsychotic drug information has been updated to reflect claim counts, drug costs, and beneficiary counts for beneficiaries age 65 and older.

The “Part D Drug National Summary” and “Part D Drug State Summary” tables have been updated to include a 30-day standardized fill count for all beneficiaries. In addition, the tables now include claim count, a 30-day standardized fill count, day’s supply, drug cost and beneficiary counts for beneficiaries aged 65 and older. Lastly, flag indicators have been added to identify drugs as opioid, antibiotic, high risk medication (HRM) and/or antipsychotic.

These updates have been applied to all available calendar years of data.

August 2016 Updates

We updated the “Part D Prescriber Summary Table” (i.e., the NPI-level file) to include distinct beneficiary counts, total claim counts, and total drug costs for opioids, antibiotics, antipsychotics, and high-risk medications among the elderly. In addition, a prescriber enrollment status flag has been added to indicate whether the prescriber is enrolled, not enrolled or opted out of the Medicare program.

These updates begin with calendar year 2014 data. Previous year’s data have not been re-published with these changes.

APPENDIX A – File Attributes

Table 1. NPI / Drug Name / Generic Name Detail File Layout

#	Variable	Type	Len	Label
1	npi	Char	10	National Provider Identifier
2	nppes_provider_last_org_name	Char	70	Last Name/Organization Name of the Provider
3	nppes_provider_first_name	Char	20	First Name of the Provider
4	nppes_provider_city	Char	40	City of the Provider
5	nppes_provider_state	Char	2	State Code of the Provider
6	specialty_description	Char	75	Provider Specialty Type
7	description_flag	Char	1	Source of Provider Specialty
8	drug_name	Char	30	Brand Name
9	generic_name	Char	30	USAN Generic Name - Short Version
10	bene_count	Num	8	Number of Medicare Beneficiaries
11	total_claim_count	Num	8	Number of Medicare Part D Claims, Including Refills
12	total_30_day_fill_count	Num	8	Number of Standardized 30-Day Fills, Including Refills
13	total_day_supply	Num	8	Number of Day's Supply for All Claims
14	total_drug_cost	Num	8	Aggregate Cost Paid for All Claims
15	bene_count_ge65	Num	8	Number of Medicare Beneficiaries Age 65+
16	bene_count_ge65_suppress_flag	Char	1	Reason for Suppression of Bene_Count_Ge65
17	total_claim_count_ge65	Num	8	Number of Claims, Including Refills, for Beneficiaries Age 65+
18	ge65_suppress_flag	Char	1	Reason for Suppression of Total_Claim_Count_Ge65, Total_30_Day_Fill_Count_Ge65, Total_Day_Supply_Ge65, and Total_Drug_Cost_Ge65
19	total_30_day_fill_count_ge65	Num	8	Number of Standardized 30-Day Fills, Including Refills, for Beneficiaries Age 65+
20	total_day_supply_ge65	Num	8	Number of Day's Supply for All Claims for Beneficaries Age 65+
21	total_drug_cost_ge65	Num	8	Aggregate Cost Paid for All Claims for Beneficiaries Age 65+

Table 2. NPI Summary File Layout

#	Variable	Type	Len	Label
1	npi	Char	10	National Provider Identifier
2	nppes_provider_last_org_name	Char	70	Last Name/Organization Name of the Provider
3	nppes_provider_first_name	Char	20	First Name of the Provider
4	nppes_provider_mi	Char	1	Middle Initial of the Provider
5	nppes_credentials	Char	20	Credentials of the Provider
6	nppes_provider_gender	Char	1	Gender of the Provider
7	nppes_entity_code	Char	1	Entity Type of the Provider
8	nppes_provider_street1	Char	55	Street Address 1 of the Provider
9	nppes_provider_street2	Char	55	Street Address 2 of the Provider
10	nppes_provider_city	Char	40	City of the Provider
11	nppes_provider_zip5	Char	5	Zip Code of the Provider (first five digits)
12	nppes_provider_zip4	Char	4	Zip Code of the Provider (last four digits)
13	nppes_provider_state	Char	2	State Code of the Provider
14	nppes_provider_country	Char	2	Country Code of the Provider
15	specialty_description	Char	75	Provider Specialty Type
16	description_flag	Char	1	Source of Provider Specialty
17	medicare_prvdr_enroll_status	Char	1	Enrollment Status of the Provider in the Medicare Program
18	total_claim_count	Num	8	Number of Medicare Part D Claims, Including Refills
19	total_30_day_fill_count	Num	8	Number of Standardized 30-Day Fills, Including Refills
20	total_drug_cost	Num	8	Aggregate Cost Paid for All Claims
21	total_day_supply	Num	8	Number of Day's Supply for All Claims
22	bene_count	Num	8	Number of Medicare Beneficiaries
23	ge65_suppress_flag	Char	1	Reason for Suppression of Total_Claim_Count_Ge65, Total_30_Day_Fill_Count_Ge65, Total_Drug_Cost_Ge65 and Total_Day_Supply_Ge65
24	total_claim_count_ge65	Num	8	Number of Claims, Including Refills, for Beneficiaries Age 65+
25	total_30_day_fill_count_ge65	Num	8	Number of Standardized 30-Day Fills, Including Refills, for Beneficiaries Age 65+
26	total_drug_cost_ge65	Num	8	Aggregate Cost Paid for All Claims for Beneficiaries Age 65+
27	total_day_supply_ge65	Num	8	Number of Day's Supply for All Claims for Beneficaries Age 65+
28	bene_count_ge65_suppress_flag	Char	1	Reason for Suppression of Bene_Count_Ge65
29	bene_count_ge65	Num	8	Number of Medicare Beneficiaries Age 65+
30	brand_suppress_flag	Char	1	Reason for Suppression of Brand_Claim_Count and Brand_Drug_Cost
31	brand_claim_count	Num	8	Total Claims of Brand-Name Drugs, Including Refills
32	brand_drug_cost	Num	8	Aggregate Cost Paid for Brand-Name Drugs
33	generic_suppress_flag	Char	1	Reason for Suppression of Generic_Claim_Count and Generic_Drug_Cost
34	generic_claim_count	Num	8	Total Claims of Generic Drugs, Including Refills
35	generic_drug_cost	Num	8	Aggregate Cost Paid for Generic Drugs
36	other_suppress_flag	Char	1	Reason for Suppression of Other_Claim_Count and Other_Drug_Cost
37	other_claim_count	Num	8	Total Claims of Other Drugs, Including Refills
38	other_drug_cost	Num	8	Aggregate Cost Paid for Other Drugs
39	mapd_suppress_flag	Char	1	Reason for Suppression of MAPD_Claim_Count and MAPD_Drug_Cost
40	mapd_claim_count	Num	8	Number of Claims for Beneficiaries Covered by MAPD Plans
41	mapd_drug_cost	Num	8	Aggregate Cost Paid for Claims Filled by Beneficiaries in MAPD Plans

Table 2. NPI Summary File Layout (Cont.)

#	Variable	Type	Len	Label
42	pdp_suppress_flag	Char	1	Reason for Suppression of PDP_Claim_Count and PDP_Drug_Cost
43	pdp_claim_count	Num	8	Number of Claims for Beneficiaries Covered by Standalone PDP Plans
44	pdp_drug_cost	Num	8	Aggregate Cost Paid for Claims Filled by Beneficiaries in Standalone PDP Plans
45	lis_suppress_flag	Char	1	Reason for Suppression of Lis_Claim_Count and Lis_Drug_Cost
46	lis_claim_count	Num	8	Number of Claims for Beneficiaries Covered by Low-Income Subsidy
47	lis_drug_cost	Num	8	Aggregate Cost Paid for Claims Covered by Low-Income Subsidy
48	nonlis_suppress_flag	Char	1	Reason for Suppression of Nonlis_Claim_Count and Nonlis_Drug_Cost
49	nonlis_claim_count	Num	8	Number of Claims for Beneficiaries Not Covered by Low-Income Subsidy
50	nonlis_drug_cost	Num	8	Aggregate Cost Paid for Claims Not Covered by Low-Income Subsidy
51	opioid_claim_count	Num	8	Total Claims of Opioid Drugs, Including Refills
52	opioid_drug_cost	Num	8	Aggregate Cost Paid for Opioid Drugs
53	opioid_day_supply	Num	8	Number of Day's Supply of All Opioid Drugs
54	opioid_bene_count	Num	8	Number of Medicare Beneficiaries Filling Opioid Claims
55	opioid_prescriber_rate	Num	8	Opioid_Claim_Count divided by the Total_Claim_Count, multiplied by 100.
56	antibiotic_claim_count	Num	8	Total Claims of Antibiotic Drugs, Including Refills
57	antibiotic_drug_cost	Num	8	Aggregate Cost Paid for Antibiotic Drugs
58	antibiotic_bene_count	Num	8	Number of Medicare Beneficiaries Filling Antibiotic Claims
59	hrm_ge65_suppress_flag	Char	1	Reason for Suppression of HRM_Claim_Count_Ge65 and HRM_Drug_Cost_Ge65
60	hrm_claim_count_ge65	Num	8	Total Claims of HRM Drugs, Including Refills, for Beneficiaries Age 65+
61	hrm_drug_cost_ge65	Num	8	Aggregate Cost Paid for HRM Drugs for Beneficiaries Age 65+
62	hrm_bene_ge65_suppress_flag	Char	1	Reason for Suppression of HRM_Bene_Count_Ge65
63	hrm_bene_count_ge65	Num	8	Number of Medicare Beneficiaries Age 65+ Filling HRM Claims
64	antipsych_ge65_suppress_flag	Char	1	Reason for Suppression of Antipsych_Claim_Count_Ge65 and Antipsych_Drug_Cost_Ge65
65	antipsych_claim_count_ge65	Num	8	Total Claims of Antipsychotic Drugs, Including Refills, for Beneficiaries Age 65+
66	antipsych_drug_cost_ge65	Num	8	Aggregate Cost Paid for Antipsychotic Drugs for Beneficiaries Age 65+
67	antipsych_bene_ge65_suppress_flg	Char	1	Reason for Suppression of Antipsych_Bene_Count_Ge65
68	antipsych_bene_count_ge65	Num	8	Number of Medicare Beneficiaries Age 65+ Filling Antipsychotic Claims
69	average_age_beneficiaries	Num	8	Average Age of Beneficiaries
70	beneficiary_age_less_65_count	Num	8	Number of Beneficiaries Age Less Than 65
71	beneficiary_age_65_74_count	Num	8	Number of Beneficiaries Age 65 to 74
72	beneficiary_age_75_84_count	Num	8	Number of Beneficiaries Age 75 to 84
73	beneficiary_age_greater_84_count	Num	8	Number of Beneficiaries Age Greater Than 84
74	beneficiary_female_count	Num	8	Number of Female Beneficiaries
75	beneficiary_male_count	Num	8	Number of Male Beneficiaries
76	beneficiary_race_white_count	Num	8	Number of Non-Hispanic White Beneficiaries
77	beneficiary_race_black_count	Num	8	Number of Black or African American Beneficiaries
78	beneficiary_race_asian_pi_count	Num	8	Number of Asian Pacific Islander Beneficiaries
79	beneficiary_race_hispanic_count	Num	8	Number of Hispanic Beneficiaries
80	beneficiary_race_nat_ind_count	Num	8	Number of American Indian/Alaskan Native Beneficiaries
81	beneficiary_race_other_count	Num	8	Number of Beneficiaries with Race Not Elsewhere Classified
82	beneficiary_nondual_count	Num	8	Number of Beneficiaries with Medicare Only Entitlement
83	beneficiary_dual_count	Num	8	Number of Beneficiaries with Medicare & Medicaid Entitlement
84	beneficiary_average_risk_score	Num	8	Average Hierarchical Condition Category (HCC) Risk Score of Beneficiaries

APPENDIX B – Part D Prescriber PUF Technical Specifications

This programming specifications appendix provides users with additional information about how the Part D Prescriber public use file (PUF) was developed. It describes the source data used in creating the file, including any supplemental information beyond the Medicare Part D event data. This document also describes the step-by-step methodology CMS used to create the Part D Prescriber PUF.

Source Data:

1. ***CMS Part D Event (PDE) Calendar Year Data*** available at: http://www.resdac.org/cms-data/files/pde.

2. ***Medicare Part D Drug Characteristics Data*** available at: https://www.resdac.org/cms-data/files/part-d-drug-characteristics.

3. ***Master Beneficiary Summary Calendar Year Data*** available at: https://www.resdac.org/cms-data/files/mbsf.

4. ***CMS National Plan and Provider Enumeration System (NPPES) Name and Address data*** available at: http://download.cms.gov/nppes/NPI_Files.html. The most current NPPES name and address information for active NPIs is in the "NPPES Data Dissemination (month, DD, YYYY)" full NPI replacement file.

5. ***CMS Carrier Calendar Year Data*** see: http://www.resdac.org/cms-data/files/carrier-rif.

6. ***CMS Durable Medical Equipment, Prosthetic, Orthotic and Other Supplies (DMEPOS) Calendar Year Data*** see: http://www.resdac.org/cms-data/files/dme-rif.

7. ***CMS Provider Specialty Descriptions*** available at: https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/MedicareProviderSupEnroll/Taxonomy.html. The provider specialty crosswalk is titled "Taxonomy Crosswalk (Updated MM-DD-YYY)".

8. ***National Uniform Claim Committee (NUCC) taxonomy code set*** available at: http://www.nucc.org/index.php?option=com_content&view=article&id=107&Itemid=132.

Methodology:

Step 1: Starting with the CMS PDE Calendar Year Data (which includes Part D Drug Characteristics Data pre-merged when requested together), exclude over-the-counter drugs from this file using the following criteria:

- Drug Coverage Status Code (DRCVSTCD) **NOT** = "O" *(To exclude over-the-counter drugs)*

Step 2: Create the following variables (and limit the file to only these variables) from CMS PDE Calendar Year Data from Step 1:

- **NPI** = CCW Prescriber ID (CCW_PRSCRBR_ID)
- **Beneficiary_id** = Encrypted CCW Beneficiary ID (BENE_ID)
- **drug_name** = Brand Name (BN)
- **generic_name** = Generic Name (GNN)
- **total_day_supply** = Days Supply (DAYSSPLY)
- **total_drug_cost** = Gross Drug Cost (TOTALCST)
- Derive **total_30_day_fill_count = total_day_supply** / 30; when **total_30_day_fill_count** < 1 then set **total_30_day_fill_count** = 1; when **total_30_day_fill_count** > 12 then set **total_30_day_fill_count** = 12

Step 3: Merge output from Step 2 (retaining all data if matched) using **Beneficiary_id** with the Master Beneficiary Summary Calendar Year Data using **Encrypted CCW Beneficiary ID (BENE_ID)** and attach the following:

- Derive **AgeGE65** = 1 when **Age at End of Reference** Year (AGE) > 64; otherwise **AGEGE65** = 0
- Derive **PartD_indicator** = value of "PDP" when first character of any of the 12 monthly **Encrypted Contract ID (CNTRCT<month>)** is equal to a value of "E", "S", or "X"; otherwise **PartD_indicator** = value of "MAPD" when first character of any of the 12 monthly **Encrypted Contract ID** (**CNTRCT<month>)** is equal to a value of "H", or "R"; otherwise drop the record (not Part D enrolled)

Step 4: Summarize the following variables from the output from Step 3 to the **NPI**, **drug_name**, and **generic_name**:

- **bene_count** = distinct count of beneficiary_id
- **total_claim_count** = sum of 1 (represents count of prescription drug events)
- **total_day_supply** = sum of total_day_supply
- **total_drug_cost** = sum of total_drug_cost
- **bene_count_ge65** = distinct count of beneficiary_id when AgeGE65 = 1
- **total_claim_count_ge65** = sum of 1 (represents count of prescription drug events) when AgeGE65 = 1
- **total_day_supply_ge65** = sum of total_day_supply when AgeGE65 = 1
- **total_drug_cost_ge65** = sum of total_drug_cost when AgeGE65 = 1
- **total_30_day_fill_count_ge65** = sum of total_30_day_fill_count when AgeGE65 = 1

Step 5: Merge output from Step 4 (retaining all data if matched) using **NPI** with the NPPES Name and Address Data using **NPI** and attach the following:

- **nppes_provider_last_org_name** = Provider Organization Name (Legal Business Name) when Entity Type Code = "O"; else Provider Last Name (Legal Name) when Entity Type Code = "I"
- **nppes_provider_first_name** = Provider First Name

- **nppes_provider_city** = Provider Business Practice Location Address City Name
- **nppes_provider_state** = Provider Business Practice Location Address State Name
- Derive **provider_taxonomy_code** = Taxonomy Code when associated Primary Taxonomy = "Y"

Step 6: Derive a single **specialty_description** and **description_flag** based on the hierarchy described below.

a. CMS Carrier Calendar data:

   - Extract the following variables from the CMS Carrier Calendar Year Data
     - **NPI** = Carrier Line Performing NPI Number (PRFNPI)
     - **Provider_specialty_code** = Line HCFA Provider Specialty Code (HCFASPCL)
     - **line_srvc_cnt** = Line Service Count (SRVC_CNT)

   - Derive a single **provider_specialty_code** for each **NPI** record based on the **provider_specialty_code** associated with the maximum **line_srvc_cnt**

   - Derive **specialty_description** = "Medicare Provider/Supplier Type Description" from CMS Provider Specialty Descriptions using **provider_specialty_code**

b. CMS DMEPOS Calendar Year data:

   - Extract the following variables from the CMS DMEPOS Calendar Data
     - **NPI =** DMERC Line Item Supplier NPI Number (SUP_NPI)
     - **Provider_specialty_code =** Line HCFA Provider Specialty Code (HCFASPCL)
     - **line_srvc_cnt =** Line Service Count (SRVC_CNT)

   - Derive a single **provider_specialty_code** for each **NPI** record based on the **provider_specialty_code** associated with the maximum **line_srvc_cnt**

   - Derive **specialty_description** = "Medicare Provider/Supplier Type Description" from CMS Provider Specialty Descriptions using **provider_specialty_code**

c. Merge output from Step 6 a. using **NPI** with the output from Step 6 b. using **NPI.**

   - Derive a single **NPI** with **specialty_description =** specialty_description from Step 6 a.**;** otherwise **specialty_description** = specialty_description from Step 6 b.

   - Set **description_flag** = "S"

Step 7: Merge the **NPI** from the output from Step 5 (retaining all records) with the **NPI** from the output from Step 6 c.:

- If **NPI** from the output from Step 5 = **NPI** from the output from Step 6 c. then attach **specialty_description** and **description_flag**; otherwise

- When **provider_taxonomy_code** crosswalks to a single “Medicare Provider/Supplier Type Description” from CMS Provider Specialty Descriptions then derive **specialty_description** = “Medicare Provider/Supplier Type Description” and **description_flag** = “S”; otherwise

- Derive **specialty_description** = “Classification” from the NUCC Taxonomy Set using provider_taxonomy_code and set **description_flag** = “T”