

## Part D OOPC Calculations

The Medicare Current Beneficiary Survey (MCBS) file contains information on the events reported by a sample of individuals with Medicare. Each person included in the MCBS self-reports utilization of prescription drugs (MCBS PME), which is used in estimating the Part D OOPC values. Beginning in 2006, prescription drug utilization was additionally obtained from the claims reported in the Prescription Drug Event (PDE) data.

The estimated OOPC values are based upon the drug information provided for the individual sample members where each record in the MCBS PME file is considered to represent one prescription drug. These data are used in conjunction with the Calendar Year (CY) 2016 Plan Benefit Packages submitted by plans that detail the drug benefit cost sharing and plan coverage as well as the CY 2016 plan-level formulary submissions.

The process of converting these data into a suitable format for estimating the monthly out-of-pocket costs for the current program year involves a series of crosswalk and matching algorithms. Beginning with each MCBS individual's drug prescription record, the name of each drug as described by the beneficiary is identified and linked to appropriate National Drug Codes (NDCs). To associate the MCBS drugs to NDCs, a master list of drug names and their NDC(s) is first created using two commercial sources of data--First DataBank (FDB) and Medispan. Then, each MCBS prescription drug name is mapped to one or more NDCs via this master list. For MCBS drug prescription records that can be linked to Prescription Drug Event (PDE) data, the NDC found on the PDE record is used. Beginning in 2010, drugs were identified on Part D sponsor formularies using nomenclature and unique identifiers known as RxNorm concept unique identifier codes or RXCUIs, which were developed by the National Library of Medicine (NLM). Each RXCUI on the formulary reference file tool that is used to build plan formularies is associated with a related NDC. MCBS drugs are mapped to these RXCUIs using an NDC-RXCUI crosswalk. MCBS drugs that cannot be mapped to an RXCUI are considered non-covered drugs and their costs are not included in OOPC calculations.

An average price for each RXCUI is calculated using the 2014 PDE claims data which contains information on every prescription submitted for payment under the Part D program. The average price is calculated as the total gross expenditure (drug cost + dispensing fee + taxes + vaccination fee) divided by the number of PDE events, or prescriptions for that drug. Once the MCBS prescription record has been linked to a drug name, RXCUI, and average price, it is mapped to each plan's formulary and benefit package to obtain the drug cost sharing information. In instances where a drug event has been mapped into multiple RXCUIs and therefore is possibly covered on more than one tier, the RXCUI associated with the lowest cost tier is assigned to the event for that plan. If the RXCUI that represents an MCBS drug is not on a plan's formulary, this drug is assumed to be non-covered and the full cost, as reflected by the average price, is added to a plan's OOPC value. Generic substitution is assumed such that when a generic version of a brand drug exists and is covered on the plan's formulary, the generic version is the one included in the calculations provided it is lower cost-sharing. However, therapeutic substitution (e.g. drugs in the same therapeutic class) is not assumed. In addition, Food and Drug Administration (FDA) drug approval information was utilized to determine the applicable status of MCBS drugs for purposes of coverage gap cost-sharing estimates. This data creation process results in a file that includes the total cost of the drug for each MCBS beneficiary and prescription as well as the each plan's associated cost sharing structure for that drug.

Using each plan's drug coverage status of the MCBS drugs and PBP-based cost sharing information (deductible, initial coverage limit, co-copayments and/or coinsurance, gap coverage, etc.), the beneficiary's out-of-pocket costs are calculated. The calculations are done according to the type of

Part D plan (Defined Standard, Basic Alternative, Actuarially Equivalent, or Enhanced Alternative) and the associated cost share structure. The calculations are based upon the assumption that each prescription is for a one-month (30-day) supply of drugs (rather than the 90- or other-day) from an In-Network Pharmacy. In the event that both a preferred and a non-preferred pharmacy exist, the calculations are based on the preferred pharmacy cost-sharing.

The OOPC calculations sort the drugs and assign cost sharing at the various thresholds (deductible, ICL, catastrophic). The prescriptions are reviewed sequentially, with each plan's cost sharing structure used through each phase (e.g., pre-ICL, gap, and post-ICL). The copayments are used directly in calculations of costs; the coinsurance amounts are determined by multiplying the coinsurance percentage by the full cost of the drug from the PDE data. As noted earlier, throughout the processing, the lowest cost sharing available for a given MCBS drug is used. Additional plan features are also incorporated into the calculations, such as mandatory gap coverage (both the standard benefit for generic and brand drugs and the coverage gap discount program for applicable drugs), additional gap coverage offered for full and/or partial tiers, drugs with Free First Fill, and tiers that are exempt from the deductible.

For MA plans that do not offer a Part D benefit (MA-Only plans), the calculation is identical to that provided for Original Medicare beneficiaries not participating in the Part D program. This calculation applies 2014 PDE average prices to MCBS prescription counts to calculate a total non-covered drug cost.

The beneficiary level OOPC values are then aggregated to the plan level (across all beneficiaries in the data set) using the individual MCBS sample weights in order to yield nationally representative data. The annual costs are adjusted for enrollment to yield mean monthly costs. Note that some other adjustments to the data are necessary to bring valued total drug usage forward from the 2010-2011 survey years. CMS provided factors are applied to each self-reported MCBS drug prescription to account for initial survey underreporting and then for increased annual usage between 2010-2011 and 2016.