CENTERS FOR MEDICARE & MEDICAID SERVICES

CY 2015 OUT-OF-POCKET COST MODEL

USER'S GUIDE

APRIL 2014

Table of Contents

Introduction

The OOPC Model is a set of programs used to calculate the estimated out-of-pocket costs (OOPC) for a given set of beneficiaries in order to determine the value of the benefits being offered by a Plan Benefit Package (PBP). The purpose of the User's Guide is to provide Medicare Advantage Organizations (MAOs) and Prescription Drug Plan (PDP) Sponsors with the technical information required to generate OOPC values while preparing CY 2015 bid submissions to comply with Centers for Medicare & Medicaid Services (CMS) requirements. Stand-alone PDPs and MAOs are encouraged to run their plan benefit structures through the SAS OOPC model to ensure that their plan offerings comply with the following regulatory requirements addressed in the Announcement of Calendar Year 2015 Medicare Advantage Capitation Rates and Medicare Advantage and Part D Payment Policies and Final Call Letter: Part C Meaningful Difference, Part C Total Beneficiary Cost (TBC), and Part D Meaningful Difference. Questions can be directed as follows:

For technical questions about the OOPC model, please submit an email to
OOPC@cms.hhs.gov

For Part C policy related questions about meaningful difference and Total Beneficiary Cost (TBC), please contact https://mabenefitsmailbox.lmi.org/

For Part D policy related questions about meaningful difference, please submit an email to
partdbenefits@cms.hhs.gov

For Bid Pricing Tool (BPT) questions, please submit questions to
actuarial-bids@cms.hhs.gov

The OOPC Model is designed to allow plan organizations to run their submitted benefit structures through the software code and data used by CMS for evaluating annual bid submissions. The software is a modified version of the code used to provide the estimated out-of-pocket costs produced for the Medicare Plan Finder published on the Medicare.gov website. The Medicare Plan Finder provides out-of-pocket cost (OOPC) values for MAO, PDP, Original Medicare, and Medigap plans according to the self-reported health status of beneficiaries. In contrast, the OOPC Model reports OOPC values by PBP-based service category at the plan level. The section **Development of the Out-of-Pocket Costs (OOPC) Data** summarizes the process used by CMS to produce the OOPC values. MAOs and PDP Sponsors are encouraged to review the more comprehensive "CMS CY 2015 Out-of-Pocket Cost Model Methodology April 2014" document located in the OOPC Model package and at

http://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovGenIn/OOPCResources.html

The current version of the Model uses the same beneficiary utilization data as was used for the 2014 Plan Finder values. Organizations apply their own 2015 PBP and formulary data to the software. After the user has successfully input their data for a particular contract/plan, and exit/validated the PBP (a given organization may have multiple plans for a given contract), then the data are ready for use in the Model. Users download the OOPC Model and follow the directions for where to copy the SAS programs and SAS data that serve as the other inputs. The user edits several small SAS programs and then executes them.

The OOPC Model package (**OOPC2015PLANV1.ZIP**) consists of a set of provided input datasets (SAS transport format) and a series of SAS programs. The programs import PBP, formulary, and utilization data. The SAS programs calculate person-plan-level costs for each service category and for part D benefits, and summarize the costs to the plan level, and output to a plan-level Excel file.

The Model produces OOPC values for Part C and Part D services by utilizing their completed PBP and drug formulary data. This User's Guide describes the contents of the OOPC software package, provides specific instructions on how to calculate OOPC values for the PBP service categories, and explains how to generate output values in the form of an Excel workbook.

Note: CMS does not evaluate Dual Eligible Special Needs Plans (D-SNPs) and Medicare-Medicaid Capitated Financial Alignment Demonstration Plans (MMPs) with respect to meaningful difference and total beneficiary cost (TBC) requirements.

Resource Requirements

Operation of the Model requires that the user be familiar with PC file management and operating SAS software.

Model Requirements: The Model has been tested on a variety of PCs.. The user will need WINZIP to unzip the OOPC model package and storage space to accommodate the downloadable files that total over 100 MB (4 MB zipped). A version of PC SAS with SAS/ACCESS Interface to PC Files installed will be required. The Model was developed and tested using SAS Version 9.3 on 64-bit machines using Windows Office 10. However, it has also been tested using SAS Version 9.1 on 32-bit machines using Windows Office 7. Microsoft Excel is required for generating and using the Model output.

Note: Previous versions of the Model were developed using SAS Version 9.1 For any questions or issues concerning running the model, please contact your SAS technical consultant.

Processing Time: The processing of the data to generate the OOPC values is inherently time-consuming, but efforts have been made to make the model run as efficiently as possible. The programs that import the various input files will run quickly. However, as described in the **Development of the Out-of-Pocket Costs (OOPC) Data** section, the claims data for several thousand MCBS respondents must be applied to the cost-sharing structure for each service category. Also, features such as deductibles and plan maximums must be applied and the costs adjusted. This process is expanded whenever values are produced for multiple plans. The Part D calculations involve many different variables and combinations of covered/non-covered drugs, pricing structures, and formularies. Running a single or a few plans at a time will shorten the run time, especially when fewer drug formularies are involved.

Input Datasets Included in the Software Package

Utilization Data Provided by CMS

The software includes two primary SAS transport datasets for Part C calculations. The person-level (**PERSON.XPT**) file contains information on the cohort of beneficiaries in the 2009/2010 MCBS survey. The **UTILIZATION.XPT** file contains information on this cohort's 2009 and 2010 Medicare utilization as reported by the MCBS survey. These are used after they are converted to SAS datasets with a SAS program included in the package (**CIMPORT.SAS**). The software also includes other SAS transport datasets for the Part D calculations. The **CIMPORT.SAS** program converts these SAS transport files into SAS datasets.

Input Datasets Provided by the User

Plan List

Each user will provide a text file list of the plans to be used for each calculation of OOPC values. This file (**PLANFILE.TXT**) will consist of a combined Contract/Plan/Segment identifier. For example, Contract Plan Segment: H9999 001 001 will appear as H9999001001. PDP plan S9999 001 will appear as S9999001000.

Planfile.txt Record Layout

Required File Format = ASCII File - Tab Delimited
Do not include a header record
Filename extension should be ".TXT"

Field Name	Field Type	Field Length	Field Description	Sample Field Value(s)
Contract_Plan_Segment	CHAR	11	Unique Contract/Plan/Segment identifier	H9999001000

Parts of an example file look like:
H9999001000
H9998002000
H9997003000
H9996001001
S9999001000
S9998001000
S9997002000

Note: Only plans in the plan list will be run in the OOPC calculation, even if more plans exist in a user's PBP database.

Each year, plan personnel and other users are required to enter their benefit data into the Plan Benefit Package (PBP) software in order to submit a bid. Plans are provided with instructions each year on how to enter data into the PBP software. We provide an overview of how plan data are collected and input into the tool below.

Background of the PBP/Bid Process: Organizations first complete or update the Plan Creation Module of HPMS establishing the plans available under each contract. The CY 2015 version of the PBP software is available in HPMS as of April 2014. Detailed instructions are provided to the plans on how to obtain the software and then how to perform the necessary data entry and bid process. CMS provides instructions on the HPMS (via the Call Letter) and provides training via other methods.

The software is installed on a user's local PC (or on a network). Documentation (e.g., the Bid Manual) is provided to guide the user. The PBP software has exit/validation rules to ensure that the bid will meet certain specifications. Shortly after the PBP software becomes available, plans may begin submitting their bid(s) to CMS by uploading the PBP databases. Bids are rejected or accepted. Plans have several weeks before their final bid (upload) is due to CMS.

PBP Data Input to OOPC Tool: As part of this bid submission process, the PBP data is automatically stored in a database. Once a database has been created using the PBP system, a SAS program in the OOPC Model will read a plan's PBP data from the Access database and will convert it to a SAS file.

The PBP-created databases that are needed as input to the Model are **PBP2015.MDB** and **PBPPLANS2015.MDB**. The OOPC Model needs to point to the location of the two databases.

Note: The OOPC Model should point to the databases associated with the PBP Super User. If there are other PBP data entry users, the Super User should ensure that they have received the most up-to-date data entry before running the OOPC Model.

Drug Formulary Data

For producing the Part D OOPC values, plan organizations with Part D benefits (PDPs and MA-PDs) will produce four files that describe the plan's formulary.

The first file, **FORMULARY.TXT**, needs to contain a tab-delimited list of the drugs for each formulary of the plans to be included in an OOPC calculation. This and other .txt files described below should not contain header, or label rows, and should keep any leading zeroes. Each row in the file will contain, in this order: a formulary identifier, an RXCUI, and a Tier-level identifier (1-6). This information can be obtained from the plan organization's formulary.

Formulary.txt Record Layout

Required File Format = ASCII File - Tab Delimited
Do not include a header record
Filename extension should be ".TXT"

Field Name	Field Type	Field Length	Field Description	Sample Field Value(s)
Formulary ID	CHAR	8	Unique Formulary Identifier	00015990
RXCUI	Number	Maximum of 8 digits	Rx Norm concept unique identifier from the active CY2015 Formulary Reference File	721775
Tier Level	CHAR	1	Defines the Cost Share Tier level Associated with the drug	1 = Tier Level 1 2 = Tier Level 2 3 = Tier Level 3 4 = Tier Level 4 5 = Tier Level 5 6 = Tier Level 6

Parts of an example file look like:

```
00015990  721775           1
00015991  721793           1
00015992  721795           2
00015993  721797           3
00015994  722113           2
```

The second file, **GAP_DRUGS.TXT** contains a tab-delimited list of all plans and drugs (RXCUIs) for each plan that has partial tier coverage. This information can be obtained from the plan organizations' supplemental formulary file submissions. The file will be submitted with a Contract identifier and a Plan identifier (no segment identifier required).

The third file, **FFF.TXT**, contains a tab-delimited list of all plans and drugs (RXCUIs) for each plan that offers Free First Fill coverage. This information can be obtained from the plan organizations' supplemental formulary file submissions. The file will be submitted with a Contract identifier and a Plan identifier (no segment identifier required).

Note: If a plan has no partial tier coverage or no Free First Fill drugs, a blank version (i.e. no rows) of the **GAP_DRUGS.TXT or the FFF.TXT** file needs to be created and saved.

Gap_Drugs.txt/FFF.txt Record Layout

Required File Format = ASCII File - Tab Delimited
Do not include a header record
Filename extension should be ".TXT"

Field Name	Field Type	Field Length	Field Description	Sample Field Value(s)
Contract ID	CHAR	5	Contract Number	H9999
Plan ID	CHAR	3	Plan Identifier	001
RXCUI	Number	Maximum of 8 digits	Rx Norm concept unique identifier from the active CY2015 Formulary Reference File	721775

Parts of an example file looks like:

H9999	001	721775
H9999	001	721793
H9999	001	721795
S9999	001	721797
S9999	001	722113

The fourth file, **PLAN_FORMULARY.TXT**, contains a tab-delimited list of all contract, plan, and formulary identifiers that are to be run. The list of plans needs to correspond exactly with the list of plans in the **PLANFILE.TXT** file described above, although only the contract plan and plan identifiers are required.

Plan Formulary.txt Record Layout

Required File Format = ASCII File - Tab Delimited
Do not include a header record
Filename extension should be ".TXT"

Field Name	Field Type	Field Length	Field Description	Sample Field Value(s)
Contract ID	CHAR	5	Contract Number	H9999
Plan ID	CHAR	3	Plan Identifier	001
Formulary ID	CHAR	8	Unique Formulary Identifier	00015990

Parts of an example file looks like:

H9999	001	00015990
H9998	002	00015991
H9997	003	00015992
H9996	001	00015993
S9999	001	00015994
S9998	001	00015990
S9997	002	00015991

Programs Included in the Software Package

The complete list of SAS Programs can be found in the Contents of the Zip File section below. The key programs that launch the computations are described below:

CIMPORT.SAS converts the SAS transport files supplied with this software into SAS datasets.

PARTD_FORM.SAS takes the Part D related formulary files described above and converts them into SAS format.

OOPCV1P.SAS supplies user-defined parameters needed to run the OOPC Model and calls the other SAS programs that carry out the calculations.

Instructions for Running the Model and Creating OOPC Values

Please read and follow the instructions carefully before running the software.

<u>Step 1</u>: Create a text file (**PLANFILE.TXT**) that lists the plans of interest. Make a note of the directory location of the file

<u>Step 2</u>: Complete the PBP data entry for plans of interest using the PBP software. The resulting files will be named **PBP2015.MDB** and **PBPPLANS2015.MDB**. Make a note of the location of these files: e.g. c:\program files\PBP2015.

<u>Step 3</u>: Create text files for the formulary information of the plans to be run: **FORMULARY.TXT**, **PLAN_FORMULARY.TXT, GAP_DRUGS.TXT,** and **FFF.TXT** and copy them to a created formulary directory: e.g. c:\oopc\formulary. Make a note of the location of these files.

Note: If no plans have Part D benefits, you still need to create a formulary directory even if it contains no formulary text files.

<u>Step 4</u>: Set up directory locations for all files.
   a. Copy the file **OOPC2015PLANV1.ZIP** to a working directory (e.g. **c:\oopc**) and unzip its contents to that directory. At this point there will be a **programs.zip** and **input.zip** file.
   b. In the working directory, unzip the contents of **programs.zip** to create the **c:\oopc\programs** directory for the SAS programs modified by the user.
   c. In the working directory, unzip the contents of **input.zip** to create the **c:\oopc\input** directory for the input files and the programs that are not changed by the user.
   d. Set up a directory for the output spreadsheet file (e.g. **c:\ oopc\output**)
   e. Copy the **PLANFILE.TXT** file to the newly created programs file directory. (e.g. **c:\oopc\program**).

Step 5: Edit the program **CIMPORT.SAS** as necessary so that the location **(in bold)** of the input data is specified for all of the .XPT files. The programs provided in the Model package contain, as defaults, the directory locations listed above. The user can change these locations, as desired.

    * PROGRAM: CIMPORT.SAS;
    * DESCRIPTION: IMPORT THE INPUT FILES TO THE OOPC PROCESS;

    %LET DATALOC =
    %str(**c:\oopc\input**);

    Then run **CIMPORT.SAS**.

For this and for subsequent SAS runs, check the SAS Log window to make sure the text string **ERROR** does not appear anywhere**.** (In the **Troubleshooting** section below are noted several sources of problems when setting up and running the programs).

*Note***:** Once this step is done, the user does not need to redo this step for subsequent runs.

Step 6: Import **FORMULARY.TXT**, **PLAN_FORMULARY.TXT, GAP_DRUGS.TXT,** and **FFF.TXT** files by editing the provided **PARTD_FORM.SAS** program, as necessary, for the correct directory locations and files.

Note: If no plans have Part D benefits, ignore this step.

    *PROGRAM: PARTD_FORM.SAS;

    *DESCRIPTION: CREATES SAS FILES FOR FOUR TAB DELIMITED
    FILES;

    %LET DIR =**C:\OOPC\formulary**;

    %LET FORMFILE = **FORMULARY.TXT**;

    %LET PLANFORM = **PLAN_FORMULARY.TXT**;

    %LET GAPDRUGS = **GAP_DRUGS.TXT**;

    %LET FFFDRUGS = **FFF.TXT**;

    Then run **PARTD_FORM.SAS**.

Note: Once this step is finished, and if there is no change in the formulary data, the user does not need to redo this step for subsequent runs. If necessary, the user may create and use different formulary text files and rerun **PARTD_FORM.SAS**.

Step 7: Edit the program **OOPCV1P.SAS** in the statements as shown below to indicate the directories (**in bold**) where the SAS programs and input files are stored. The programs provided in the Model package contain, as defaults, the directory locations listed above. Also, edit the program to indicate where the PBP data are stored. And finally, edit the program to identify the location and name of the output spreadsheet file. You can change the output spreadsheet name as necessary. For example, in the "**OOPC** =&OUTPUT.**OOPC_RUN**&file_date.xls)" line, to identify the first run for a given day, change the default label "**OOPC_RUN**" to "**OOPC_RUN1_**". (The **"&file_date**" function automatically outputs the date of the run.)

```
* PROGRAM: OOPCV1P.SAS;
* DESCRIPTION: MAIN OOPC PROGRAM;

%LET INPUTDIR =              c:\oopc\input;
%LET PROGDIR  =             c:\oopc\programs;
%LET PBPDIR =               c:\program files\pbp2015;
%LET FORMDIR =              c:\oopc\formulary;
%LET PLANFILEDIR =          c:\oopc\programs;
%LET OUTPUT =               c:\oopc\output\;

%OOPCV1M(RUNYEAR          =2015,
  INP                    =IN1.PERSON,
  INC                    =IN1.UTILIZATION,
  CATEG                  =IN1.CATEGORY,
  PBP                    =&PBPDIR,
  FORMULARY              =&FORMDIR,
  PLANFILE               =&PLANFILEDIR\PLANFILE.TXT,
  OOPC                   =&OUTPUT.OOPC_RUN&file_date..xls);
```

Then run **OOPCV1P.SAS**.

When checking the SAS Log window for the run, you can identify the run time by looking at the last few lines of a successful run. For example,

NOTE: The SAS System used:
    real time   1:36.67
    cpu time   43.10 seconds

The resulting Excel spreadsheet file will exist in the designated output file directory when the program finishes running successfully. The category fields display the expected average monthly cost for the contract plan segment by PBP-based benefit category. **PartD** displays the Part D OOPC. **Total** displays the sum of the categories, excluding **PartD** and includes the calculated plan- level deductible category. The **Grand Total** displays the sum of all categories, including Part D; PDP (S-Plans) will only display Part D OOPC values.

Note: As opposed to earlier versions of the OOPC Model, the calculated plan level deductible category allocation is displayed. Also, a **PartD** estimate is displayed for MA plans that do not have a Part D benefit. This estimate is identical to the calculation used for Original Medicare beneficiaries who do not participate in the Part D program. Finally, displayed for reference is the PBP_Version_Date.

An example (truncated) of the resulting spreadsheet output is shown below (test data):

Contract	Plan_ID	Segmen	Organiza	Plan_Na	Benefit_	Inpatien	Compre	Eye_Exa	Hearin	Plan_D	Total	PartD	Grand_To	PBP_Version_Date
H9998	005	000	First Hea	1876 MA-	2015	1.9483	17.857	0	0.015	24.86	98.1	240.4	338.5296	24APR2014:13:29:09
H9999	001	000	First Hea	MA-Only	2015	1.989	17.857	0	0.016	0	74.5	240.4	314.8818	23APR2014:11:08:25
H4321	001	000	First Hea	RFB MA-	2015	1.9863	5.4945	0	0.016	0	52.8	67.47	120.2592	20JUL2014:13:45:40
H2556	001	000	Universa	RFB MA(	2015	29.051	17.869	0.4313	0.034	9.017	130	240.4	370.3584	05JUN2014:14:44:48
H0345	001	000	Delta Ins	MA-PD A	2015	1.9945	17.857	0	0.016	0	76.5	60.14	136.6803	03MAY2014:13:25:02
H8765	001	000	Delta Ins	HCPP-18	2015	1.9943	17.857	0	0.016	0	76.9	109.3	186.2118	30MAY2014:11:40:34
R0123	001	000	Seniors's	MA-PD A	2015	1.9796	17.857	0	0.016	0	75.6	88.65	164.2685	14JUN2014:11:05:10
S4567	001	000	Silver St	PD-Only	2015							80.26	80.25847	01JUN2014:12:41:53

Rerunning the Model

Change Plan Benefits for a Plan: To change the plan benefit assumptions, for the same plan(s) first modify the appropriate PBP data entry.

Change Plans: To change plans, modify the PBP data entry, change the PLANFILE.TXT and if necessary, the formulary .txt files.

Change Formulary files/Same plan: To change formulary assumptions for the same plan(s), change the formulary .txt files.

For any of the above changes, after changing input files, and rerunning as necessary, **PARTD_FORM.SAS**, rerun **OOPCV1P.SAS**, while changing the Excel output file name.

Contents of the Output (Excel) File

The output from the OOPC Model is a single excel file. The table below lists the labels as they appear in the output file and in the corresponding detailed heading.

Note: Labels used in the output file are restricted to no more than 32 characters by SAS.

Label Used in Output Files	Detailed Heading/Description
Contract_Number	Contract Number
Plan_ID	Plan ID
Segment_ID	Segment ID
Organization_Marketing_Name	Organization Marketing Name
Plan_Name	Plan Name
Benefit_Year	Benefit Year/PBP for Estimated OOPC Values
Inpatient_Hospital_Acute_Care	Inpatient Hospital Services including Acute OOPC Value
Inpatient_Mental_Health_Care	Inpatient Psychiatric Hospital Services OOPC
Skilled_Nursing_Facility	Skilled Nursing Facility OOPC Value
Cardiac_Rehabilitation_Services	Cardiac Rehabilitation Services OOPC Value
Pulmonary_Rehab_Services	Pulmonary Rehabilitation Services
Emergency_Care	Emergency Care OOPC Value
Urgently_Needed_Care	Urgently Needed Care OOPC Value
Home_Health_Agency	Home Health Services OOPC Value
Primary_Care_Physician	Primary Care Physician Services OOPC Value
Chiropractic_Services	Chiropractic Services OOPC Value
Occupational_Therapy	Occupational Therapy Services OOPC Value
Physician_Specialists	Physician Specialist Services OOPC Value
Outpatient_Mental_Health_Care	Mental Health Specialty Services - Non-Physician OOPC Value
Podiatry_Services	Podiatry Services OOPC Value
Other_Health_Professionals	Other Health Care Professional Services OOPC Value
Psychiatric_Care	Psychiatric Services OOPC Value
Physical_and_Speech_Therapy	Physical Therapy and Speech-Language Pathology Services OOPC Value

Label Used in Output Files	Detailed Heading/Description
Outpatient_Lab	Outpatient Lab Services OOPC Value
Diagnostic_Tests_and_Procedures	Outpatient Diag Tests/Procedures OOPC Value
Therapeutic_Radiation	Therapeutic Radiological Services OOPC Value
Outpatient_X_Rays	Outpatient X-Ray services OOPC Value
Diagnostic_Radiological_Services	Diagnostic Radiological services OOPC Value
Outpatient_Hospital_Services	Outpatient Hospital Services OOPC Value
Ambulatory_Surgical_Center	Ambulatory Surgical Center (ASC) Services OOPC Value
Chemotherapy_Drugs	Chemotherapy OOPC Value
Ambulance	Ambulance Services OOPC Value
Durable_Medical_Equipment	Durable Medical Equipment OOPC Value
Prosthetic_Devices	Prosthetics, Orthotics, and Other Medical Supplies OOPC Value
Renal_Dialysis	End-Stage Renal Disease OOPC Value
Diabetes_Education	Diabetes Education
Medicare_Covered_Part_B_Drugs	Medicare-Covered Part B Prescription Drugs OOPC Value
Preventive_ Dental	Preventive Dental OOPC Value
Comprehensive_Dental	Comprehensive Dental OOPC Value
Eye_Exams	Eye Exams OOPC Value
Hearing_Exams	Hearing Exams OOPC Value
Plan_Deductible_Allocation	Calculated Plan Deductible
Total	Total Costs (Excluding Part D Drugs and including calculated plan deductible)
PartD	Part D OOPC Value
Grand_Total	Grand Total
PBP_Version_Date	PBP Version Date

Contents of the ZIP File (OOPC2015PLANV1.zip)

1. Input.zip
AE_BENEFIT_OOPC_COST_CALCULATION.SAS
AE_CALCS.SAS
ANNUALIZATION.sas
BA_BENEFIT_OOPC_COST_CALCULATION.SAS
BA_CALCS.SAS
BASEID_DRUGS.SAS
BASEID_PLAN_YEAR.SAS
BENE_SCRIPT.XPT
build_gapdrugs_format.sas
build_lookup.sas
Build_lookup_cms.sas
CATEGORY.XPT
CHRONC.SAS
CLEANUP.SAS
CONVERT.SAS
COST_SHARING_AMBULANCE.SAS
COST_SHARING_ASC.SAS
COST_SHARING_CARDIAC_REHAB.SAS
COST_SHARING_CHIROPRACTIC.SAS
COST_SHARING_COMP_XRAY.SAS
COST_SHARING_COMPREHENSIVE_DENTAL.SAS
COST_SHARING_DIAG.SAS
COST_SHARING_DIALYSIS.SAS
COST_SHARING_DME.SAS
COST_SHARING_EDUCATION_DIABETES.SAS
COST_SHARING_ER.SAS
COST_SHARING_EYEEXAMS.SAS
COST_SHARING_HEARINGEXAMS.SAS
COST_SHARING_HHA.SAS
COST_SHARING_INPATIENT_ACUTE.SAS
COST_SHARING_INPATIENT_PSYCH.SAS
COST_SHARING_LAB.SAS
COST_SHARING_MEDICARE_DRUGS.SAS
COST_SHARING_MEDICARE_DRUGS_CHEMO.SAS
COST_SHARING_MNTLHLTH.SAS
COST_SHARING_ORTHOTICS.SAS
COST_SHARING_OT.SAS
COST_SHARING_OTHER.SAS
COST_SHARING_OUTPAT.SAS
COST_SHARING_PCP.SAS
COST_SHARING_PODIATRY.SAS
COST_SHARING_PREVENTIVE_DENTAL.SAS
COST_SHARING_PSYCH.SAS
COST_SHARING_PT.SAS
COST_SHARING_PULMONARY_REHAB.SAS

COST_SHARING_RADIATION.SAS
COST_SHARING_SNF.SAS
COST_SHARING_SPECIALIST.SAS
COST_SHARING_SUPPLIES.SAS
COST_SHARING_URGENT_CARE.SAS
COST_SHARING_XRAY.SAS
DRUGLIST_RXCUI.XPT
DS_BENEFIT_OOPC_COST_CALCULATION.SAS
DS_CALCS.SAS
EA_BENEFIT_OOPC_COST_CALCULATION.SAS
EA_CALCS.SAS
EXTRACT_FILE_CREATION.SAS
FFS_BENEFIT_OOPC_COST_CALCULATION.SAS
FINISH_MRX.SAS
formats.xpt
MISSING_CELLS_YEAR.SAS
MOC_FILE_CREATION.SAS
OOPCV1M.SAS
PBP_CMS.SAS
PBP_DRUG_VARIABLES.SAS
PBP_IMPORT.SAS
PBP_IMPORT_CMS.SAS
PBP_IMPORT_PARTD.SAS
PBP_IMPORT_PARTD_CMS.SAS
PBPCATS.SAS
PERSON.XPT
PLAN_CATNAME_NEW.SAS
PLAN_DRUGS.SAS
PLAN_LEVEL.SAS
UTILIZATION.XPT

2. Programs.zip
CIMPORT.SAS
OOPCV1P.SAS
PARTD_FORM.SAS

CY 2015 Changes to the Model

The current version of the CY 2015 OOPC model (**OOPC2015PLANV1.ZIP)** is an update of the model delivered in January 2014 **(OOPC2014MPFPLANV1.zip)**. For the 2015 OOPC model, the following changes have been made:

- The model uses 2015 PBP data structures.
- The model uses a March 2014 Formulary Reference File (FRF), associated cross-reference file, and generic substitution data file (the earlier versions used July 2013 input files).
- The model uses 2013 PDE data to calculate average drug prices (the last version used 2012 PDE data).
- Other code enhancements and modifications have been made to the SAS code.

Development of the Out-of-Pocket Costs (OOPC) Data

The OOPC Model was developed using the methodology summarized below. Medicare Advantage Organizations and Plan Sponsors are encouraged to review the more comprehensive "CY 2015 Out-of-Pocket Cost (OOPC) Model Methodology April 2014" document located at:

http://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovGenIn/OOPCResources.html.

The Centers for Medicare & Medicaid Services (CMS) used the events or incidents of health care usage reported by individuals from the Medicare Current Beneficiary Survey (MCBS). We matched the reported use of health care to the individual claims history to make sure we included Medicare covered services as well as services not covered by Medicare.

For the CY 2015 OOPC Model, two years (2009 and 2010) of MCBS data are combined to create statistically valid and reliable cost values. Combining the data for both years creates a nationally representative cohort of individuals with Medicare.

We excluded individuals for certain reasons including if they did not participate in both Medicare Parts A & B for the full 12 months of the year or if they were in a long-term care facility for any part of the year. We wanted to focus on individuals in Original Medicare so that we could link both MCBS survey results and the Medicare claims data for the same period. We also excluded certain categories of individuals whose claims are paid differently or for whom we would not have a full complement of data.

We calculated average monthly out-of-pocket costs for each health plan. CMS used historical Medicare claims data and survey data for non-Medicare-covered services to determine total health care utilization for each person with Medicare. Beneficiaries eligible for low income subsidies and cost sharing are not included in the OOPC calculations. As appropriate, costs for the various service categories were inflated from 2009/2010 to the plan year using inflation factors provided by CMS/OACT. Beneficiary utilization claims were mapped into appropriate PBP-based categories using diagnosis, procedure, and revenue center code information. CMS then applied the data entered into

the Plan Benefit Packages (PBPs) to compute the out-of-pocket costs based on benefits covered and co-payments/coinsurance for each health care service. The beneficiary level OOPC values are then aggregated to plan level using the individual MCBS sample weights in order to yield nationally representative data. Annual values are enrollment-adjusted to yield mean monthly costs.

CMS made the following basic assumptions related to the out-of-pocket cost estimates for Medicare Advantage Plans:

- Use CY 2015 Plan Benefit Packages to define the out-of-pocket cost values.
- Use cost shares for in-network providers.
- Use minimum co-payments if stated as a minimum/maximum range.
- Use in-network deductibles and plan maximums, as applicable (please note that a combined in- and out-of-network deductible is for plans without the in-network deductible).
- Optional Supplemental benefits are not included.
- Costs for select Mandatory Supplemental benefits are included, based on available MCBS data.

CMS made the following basic assumptions related to the out-of-pocket cost estimates for prescription drugs:

- MCBS drug events are mapped into RXCUI codes to apply a particular plan's tier-formulary based cost sharing. Use Prescription Drug Event (PDE) claims data (2013) for average drug prices. Relevant deductibles are also taken into account. A more complete description can be found under the **Part D Cost Sharing OOPC** section.

Medicare and Non-Medicare covered services included in the out-of- pocket cost calculations for Medicare Advantage Plans are:

- Inpatient Hospital Acute Care
- Inpatient Psychiatric Hospital/Facility
- Skilled Nursing Facility
- Prescription Drugs
- Dental

Medicare covered services included in the out-of-pocket cost calculation are:

- Ambulance Services
- Ambulatory Surgical Center (ASC) Services
- Cardiac Rehabilitation Services
- Chemotherapy
- Chiropractic Services
- Medicare-Covered Dental
- Diabetes Education services
- Diagnostic Radiological services
- Durable Medical Equipment
- Emergency Care
- End-Stage Renal Diseases

- Eye Exams
- Hearing Exams
- Home Health Services
- Inpatient Hospital Services including Acute
- Inpatient Psychiatric Hospital Services
- Medicare-Covered Part B Prescription Drugs
- Mental Health Specialty Services - Non-Physician
- Occupational Therapy Services
- Other Health Care Professional Services
- Outpatient Diagnostic Tests/Procedures
- Outpatient Hospital Services
- Outpatient Lab Services
- Outpatient X-Ray services
- Physical Therapy and Speech-Language Pathology Services
- Physician Specialist Services
- Psychiatric Services
- Podiatry Services
- Primary Care Physician Services
- Prosthetics, Orthotics, and Other Medical Supplies
- Psychiatric Services
- Skilled Nursing Facility
- Therapeutic Radiological Services
- Urgently Needed Care

Medicare Advantage plans offer a wide range of benefits, some of which were not included in the out-of-pocket costs calculations because MCBS claims data are insufficient or do not exist. Some examples of benefits not included in the out-of-pocket cost values for Medicare Advantage plans are:

- Worldwide Emergency coverage outside the United States and its territories
- Transportation
- Acupuncture
- Hearing services not usually covered by Medicare
- Vision services not usually covered by Medicare
- Chiropractic services not usually covered by Medicare
- Podiatry services not usually covered by Medicare

Part D Cost Sharing OOPCs

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) 2015 Plan Benefit Packages submitted by plans that detail the drug benefit cost sharing and plan coverage as well as the CY 2015 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 2013 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 2012 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 2009-2010 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 2009-2010 and 2015.

Troubleshooting

Below are several areas where users may have problems with running the model.

Wrong or Missing Directory Locations

Make sure that all directories listed in the edited SAS programs correspond to the locations and names of the directories you have set up on your workstation. If an "input" directory is empty, the following type of error can show up in the SAS log while attempting to run the **CIMPORT.SAS or Part D_FORM.SAS** programs.

NOTE: Library IN does not exist.
ERROR: Library IN does not exist.
NOTE: Library OUTPUT does not exist.
ERROR: Physical file does not exist, c:\oopc\input\person.xpt

If an incorrect directory name for input data is listed in the OOPCV1P.SAS program, the following type of error will be displayed in the SAS log.

%LET DIR = c:\oopc\formulary (correct)
%LET DIR = c:\oopc\form (incorrect)

ERROR: Library FORMULARY does not exist.
ERROR: Unable to open catalog FORMULARY.FORMATS.

Problems with Output Files

Each new SAS run should have a new unique output file name designated in the **OOPCV1P.SAS** program. If you do not change the name from a previously created Excel file, the new SAS run will overwrite the old file contents, or if the current Excel file is open, will not produce output at all. An example error message is shown below:

ERROR: The MS Excel table OOPCS_2015 has been opened for OUTPUT. This table already exists, or there is a name conflict with an existing object. This table will not be replaced. This engine does not support the REPLACE option.
ERROR: Export unsuccessful. See SAS Log for details.

Another message will be generated if you forget to create an output directory. For example,

ERROR: Connect: 'c:\oopc\output\OOPC_RUN2015V1_20140415.xls' is not a valid path. Make sure that the path name is spelled correctly and that you are connected to the server on which the file resides.
ERROR: Error in the LIBNAME statement.

Also, you may submit a run, find no "Error" messages in the **OOPCV1P.SAS** program, and yet find no Excel output file. One way this can happen is if the plan identifiers in the **PLANLIST.TXT** file are filled out without the final 3 segment identifiers, e.g.:

H9999001

Problems with Insufficient Hard Drive Space

If you have been running the model repeatedly, you may encounter the following error message:

WARNING: File 'WORK.xxxxxx.DATA' is shorter than expected.
ERROR: The file WORK.xxxxxx.DATA is shorter than expected.

ERROR: The file WORK.xxxxxx.DATA is shorter than expected. ERROR: The file WORK.xxxxxx.DATA is shorter than expected. WARNING: Data set WORK.yyyyyy was not replaced because this step was stopped.
ERROR: The open failed because library member WORK.xxxxxx.DATA is damaged.
ERROR: The open failed because library member WORK.xxxxxx.DATA is damaged.
ERROR: The open failed because library member WORK.xxxxxx.DATA is damaged.

This problem means that SAS does not have sufficient hard disk space for its temporary files. You can reboot your machine so that more memory is available to SAS. Also, check that you do not have 'leftover' SAS temporary directories. An example of SAS temporary directories that may remain from other sessions under 'My Computer' is:

c:\Documents and Settings\yourname\Local Settings\Temp\SAS Temporary Files\
with subdirectories such as:
TD_xxxxx
SAS_util000100000150_machinename

Part D or Part C Output Expected, but Blank

When you have completed your PBP data entry, make sure you have exit/validated from the program. In one case, the Part C output for a plan appeared as a series of zeroes because Section D of the PBP had not been completed.

Also, output may not be produced if the formulary IDs are not formatted correctly (i.e. tab-delimited) or if they are formatted differently in the two input files: **FORMULARY.TXT** and **PLAN_FORMULARY.TXT**.

Running SAS 9.3 Using a 32-Bit Version of Office

The CY2015 OOPC model has been developed and tested using SAS 9.3 on 64-Bit hardware using a 64-Bit version of Windows Office 10 (Excel and Access). In a case where SAS 9.3 was run on 64-Bit hardware while using a 32-Bit version of Access and Excel (Office 2007), the following message has been observed:

602 +LIBNAME PBP ACCESS "&PBP\PBP&RUNYEAR..MDB";
ERROR: Connect: Class not registered
ERROR: Error in the LIBNAME statement.

To correct this error, one option would be to install a 64-Bit version of Office. However, to continue using 32-Bit Office, choose "SAS PC Files Server" from the SAS

installation options and then modify the engine option required to read the Access and Excel files to the existing programs in the OOPC Model package:

PBP_IMPORT.SAS

Change from:
LIBNAME PBP ACCESS "&PBP\PBP&RUNYEAR..MDB";

to:
LIBNAME PBP PCFILES path="&PBP\PBP&RUNYEAR..MDB";

PBP_IMPORT_PARTD.SAS

In the following section, change the DBMS engine name from ACCESS to ACCESSCS:

PROC IMPORT OUT= WORK.PBP_FILE_PARTD
        DATATABLE= "PBP"
        DBMS=ACCESSCS REPLACE;
    DATABASE="&PBP\PBP&RUNYEAR..MDB";
    SCANMEMO=YES;
    USEDATE=NO;
    SCANTIME=YES;
RUN;

EXTRACT_FILE_CREATION.SAS
PLAN_CATNAME_NEW.SAS

In the Export programs listed above, change the name of the spreadsheet engine from EXCEL to EXCELCS in all instances in these programs.

For example, in the following lines:

%IF &INPUT=INPUTMPF %THEN %DO;
  PROC EXPORT DATA=OOPCS_ALL_FINAL_CD_MGAPFFS
        OUTFILE= "&OOPC_W_MGAPFFS"
        DBMS=EXCELCS REPLACE;
    SHEET="OOPCS &RUNYEAR";
  RUN;
%END;

Testing

Before starting a run of the **OOPCV1P.SAS** program, it may be worth running a test on one plan to check that the data and directory locations have been set up correctly. As stated in Step 1 of the instructions, the selection of plans can be modified in the **PLANFILE.TXT** file.