CMS

CY 2012 OOPC MODEL

USER'S GUIDE

APRIL 2011

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Introduction

The OOPC Model is a set of programs used to calculate the 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 design. The purpose of this 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 2012 bid submissions to comply with 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 CY 2012 Advance Notice and 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 out of pocket costs produced for the Medicare Plan Finder published on the Medicare.gov website. The Medicare Plan Finder provides out-of-pocket (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 Out-of-Pocket Cost Methodology April 2012" Methodology document located in the OOPC Model package and at http://www.cms.gov/PrescriptionDrugCovGenIn/10_OOPCResources.asp#TopOfPage.

The current version of the Model uses the same beneficiary utilization data as was used for the 2011 Plan Finder values. Plan organizations apply their own 2012 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

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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 (**OOPC_2012_Plan_V1.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.

This document describes the contents of the OOPC software package and contains specific instructions on how to calculate OOPC values for the PBP service categories for your plan(s), and then to output these values in the form of an Excel workbook.

The Model produces OOPC values for Part C and Part D services. Below are instructions for plan sponsors to utilize their own data-entered PBP and drug formulary data.

Note: OOPC calculations for Dual Eligible Special Needs Plans (D-SNPs) can be carried out with the OOPC model. However, beneficiary organizations should refer to CMS policy guidelines, such as the Call Letter and HMPS memos to understand meaningful difference and total beneficiary cost requirements for D-SNPs.

Resource Requirements

Operation of the Model requires that the user be familiar with management of files on a PC and that the user is familiar with using SAS.

Model Requirements: The Model has been tested on a variety of PCs—mostly with machines having at least 3 GB of RAM and 30 GB of free hard-drive disk space. A version of PC SAS will be required, WinZip, and Excel for reading and using the Model output. The Model was developed and tested using SAS Version 9.1 on 32-bit machines. The workstation will need to be able to store programs and files in the downloadable files that total almost 50 MB (4 MB zipped).

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 approximately 13,000 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. As an example, in testing with several versions of PCs, the clock

time for running 7 sample plans took between 3 minutes and 10 minutes. Running single or a few plans at a time will lower 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 2005/2006 MCBS survey. The **UTILIZATION.XPT** file contains information on this cohort's 2005 and 2006 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	H99990010 00

Part of an example file looks like:

H9999001000
H9998002000
H9997003000
H9996001001
S9999001000
S9998001000

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S9997002000

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

PBP Data

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

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 2012 version of the PBP software is available in HPMS as of April 8, 2011. 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 table 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 converts it to a SAS file.

The PBP-created databases that are needed as input to the Model are **PBP2012.MDB** and **PBPPlans2012.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 three 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

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and other .txt files described below should not contain header, or label rows, and should keep any leading zeros. 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	00012001
RXCUI	Number	Maximum of 8 digits	Rx Norm concept unique identifier from the active Formulary Reference file	72036
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

Part of an example file looks like:

00012007	72036	1
00012013	72037	1
00012025	72080	2
00012027	72046	3
00012028	72058	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). If a plan has no partial tier coverage, a blank version (i.e.: no rows) of the **GAP_DRUGS.TXT** file needs to be created and saved.

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

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

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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 Formulary Reference file	72036

Part of an example file looks like:

```
H9999    001    72036
H9999    001    72037
H9999    001    72038
S9999    001    72046
S9999    001    72058
```

The third 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	00012001

Part of an example file looks like:

```
H9999    001    00012007
H9998    002    00012013
H9997    003    00012025
H9996    001    00012027
S9999    001    00012028
S9998    001    00012007
S9997    002    00012013
```

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.

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

Step 2: Complete the PBP data entry for plans of interest using the PBP software. The resulting files will be named **PBP2012.MDB** and **PBPPLANS2012.MDB**. Make a note of the selected location of these files: e.g. **c:\program files\pbp2012**.

Step 3: Create text files for the formulary information of the plans to be run: **FORMULARY.TXT**, **PLAN_FORMULARY.TXT and GAP_DRUGS.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.

Step 4: Set up directory locations for all files.

a. Copy the file **OOPC_2012_PLAN_V1.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\programs**).

<u>Step 5</u>: Edit the program **CIMPORT.SAS** 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.

<u>Step 6</u>: Import the **FORMULARY.TXT**, **PLAN_FORMULARY.TXT** and **GAP_DRUGS.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, you can ignore this step.

 *PROGRAM: PARTD_FORM.SAS;

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

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

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

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

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

 Then run **PARTD_FORM.SAS**.

Note: Once this step is done, 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**.

<u>Step 7</u>: 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.

 * PROGRAM: OOPCV1P.SAS;

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* DESCRIPTION: MAIN OOPC PROGRAM;

%LET INPUTDIR = **c:\oopc\input**;
%LET PROGDIR = **c:\oopc\programs**;
%LET PBPDIR   = **c:\program files\pbp2012**;
%LET FORMDIR = **c:\oopc\formulary**;
%LET OUTPUT   = **c:\oopc\output\OOPC_RUN1_Apr302011.xls**;

Then run **OOPCV1P.SAS** .

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. **Part D** displays the Part D OOPC. **Total** displays the sum of the categories, excluding **Part D** and includes the calculated plan-level deductible category (not shown). The **Grand_Total** displays the sum of all categories, including Part D, and PDP (S-Plans) will only display Part D OOPC values.

Note: To calculate the deductible, subtract the sum of the categories (excluding Part D) from the Total.

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

Contract_Numbe	Plan_ID	Segment_I	Organizatic	Plan_Nam	Benefit	Inpatient_H	Preventativ	Medicare_	Eye_Exams	Hearing_E	Total	PartD	Grand_Tota
H9999	001	000	First Health	Medicare	2012	30.261308	23.70058	0.003835	0	0.022953	128.9461	98.6818	227.6279
H9998	002	001	First Health	Medicare	2012	34.788838	32.85608	0	0	0.037665	109.9573	108.557	218.5143
H9997	001	002	First Health	Medicare	2012	36.836775	23.70058	0.003835	0	0.037665	109.9573	98.6818	208.6391
H9997	001	003	First Health	Medicare	2012	30.261308	32.85608	0.003835	0	0.022953	109.9573	98.6818	208.6391
H9997	002	001	First Health	Medicare	2012	30.261308	35.14855	0	0	0.022953	109.9573	104.4685	214.4257
H9996	010	005	Senior's Pl	Purple Adv	2012	34.788838	23.70058	0	0	0.022953	109.9573	104.4685	214.4257
H9995	011	001	Senior's Pl	Purple Adv	2012	34.788838	32.85608	0	0	0.022953	127.0388	108.557	235.5958
S9999	001	000	Universal F	Total Hea	2012							120.2713	119.5873
S9998	010	000	Universal F	Total Hea	2012							96.16585	96.16585
S9998	013	000	Universal F	Total Hea	2012							69.98609	69.98609
S9997	005	000	Delta Insur	Delta Basi	2012							120.2713	120.2713
S9996	001	000	Delta Insur	Delta Plus	2012							119.5873	119.5873

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.

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

Label Used in the 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
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
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

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Ambulatory_Surgical_Center	Ambulatory Surgical Center (ASC) Services OOPC Value
Cardiac_Rehabilitation_Services	Cardiac Rehabilitation 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 Dialysis OOPC Value
Pap_Pelvic_Exams	Pap Smears and Pelvic Exams Screening OOPC Value
Screen_Mammography_Exams	Mammography Screening OOPC Value
Medicare_Covered_Part_B_Drugs	Medicare-Covered Part B Prescription Drugs OOPC Value
Preventative_Comp_Dental	Preventive and Comprehensive Dental OOPC Value
Medicare_Covered_Dental	Medicare-Covered Dental OOPC Value
Eye_Exams	Eye Exams OOPC Value
Hearing_Exams	Hearing Exams OOPC Value
Total	Total Costs (Excluding Part D Drugs and including calculated plan deductible)
PartD	Part D OOPC Value
Grand_Total	Grand Total

Contents of the ZIP File (OOPC_2012_Plan_V1.zip)

1. Input.zip
AE_BENEFIT_OOPC_COST_CALCULATION.SAS
AE_CALCS.SAS
BASEID_DRUGS.SAS
BASEID_MSA.SAS
BASEID_PLAN_YEAR.SAS
BA_BENEFIT_OOPC_COST_CALCULATION.SAS
BA_CALCS.SAS
bene_script.xpt
build_gapdrugs_format.sas
build_lookup.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_DENTAL.SAS
COST_SHARING_DIAG.SAS
COST_SHARING_DIALYSIS.SAS
COST_SHARING_DME.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_MAMMOGRAPHY.SAS
COST_SHARING_MEDICARE_DENTAL.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_PAP.SAS
COST_SHARING_PCP.SAS
COST_SHARING_PODIATRY.SAS
COST_SHARING_PSYCH.SAS

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COST_SHARING_PT.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
MISSING_CELLS_YEAR.SAS
OOPCV1M.SAS
PBPCATS.SAS
PBPKEEP.SAS
PBP_DRUG_VARIABLES.SAS
PBP_IMPORT.SAS
PBP_IMPORT_PARTD.SAS
PERSON.XPT
PLAN_CATNAME_NEW.SAS
PLAN_DRUGS.SAS
UTILIZATION.XPT

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

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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 2012 Out-of-Pocket Cost (OOPC) Model Methodology" document located at: http://www.cms.gov/PrescriptionDrugCovGenIn/10_OOPCResources.asp#TopOfPage.

The Centers for Medicare & Medicaid Services (CMS) used the events or incidents of health care usage reported by individuals to 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 2012 OOPC Model, two years (2005 and 2006) 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 approximately 13,000 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 the actual Medicare claims payment experience to determine total health care utilization for each person with Medicare. As appropriate, utilization costs for the various service categories were inflated from 2005/2006 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 2012 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.

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- Use in-network deductibles and plan out-of-network maximums, as applicable (please note that a combined in- and out-of-network deductible is considered an in-network deductible).
- Optional Supplemental benefits are not included.
- Costs for select Mandatory Supplemental benefits are included, based on available MCBS data.
- 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 (2010) for average drug prices. Relevant deductibles and premiums are also taken into account. A more complete description can be found under the **Part D OOPC Value** section.
- Beneficiaries eligible for low income subsidies and cost sharing are not included in the OOPC calculations.

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
- Eye Exams
- Hearing Exams

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

- Ambulance Services
- Ambulatory Surgical Center (ASC) Services
- Cardiac Rehabilitation Services
- Chemotherapy
- Chiropractic Services
- Diagnostic Radiological services
- Durable Medical Equipment
- Emergency Care
- End-Stage Renal Dialysis
- Eye Exams
- Hearing Exams
- Home Health Services

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- Inpatient Hospital Services including Acute
- Inpatient Psychiatric Hospital Services
- Mammography Screening
- Medicare-Covered Dental
- Medicare-Covered Part B Prescription Drugs
- Mental Health Specialty Services - Non-Physician
- Occupational Therapy Services
- Other Health Care Professional Services
- Outpatient Diag Tests/Procedures
- Outpatient Hospital Services
- Outpatient Lab Services
- Outpatient X-Ray services
- Pap Smears and Pelvic Exams Screening
- Physical Therapy and Speech-Language Pathology Services
- Physician Specialist Services
- Podiatry Services
- Preventive and Comprehensive Dental
- 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:

- Foreign Travel Emergency to cover emergency medical care when you travel outside the United States
- Transportation
- Acupuncture
- Hearing services not usually covered by Medicare
- Vision services not usually covered by Medicare
- Prevention screening services not covered by Medicare
- Chiropractic services not usually covered by Medicare
- Podiatry services not usually covered by Medicare

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 is also 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) 2012 Plan Benefit Packages submitted by plans that detail the drug benefit cost sharing and plan coverage as well as the CY 2012 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 Code(s) (NDC). 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 Data Bank (FDB) and Medispan. Then, each MCBS prescription drug name is mapped to one or more NDCs via this master list. Beginning in 2010, drugs are 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 a crosswalk between the related NDC and the master list NDC(s) that have been previously associated with MCBS drugs. 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 2010 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) 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

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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. 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 non-preferred pharmacy exist, the calculations are based on the preferred pharmacy cost-sharing.

The OOPC calculations follow as closely as possible those used by the Medicare Drug Plan Finder in terms of sorting the drugs and assigning cost sharing at the various thresholds (deductible, ICL, catastrophic). That is, 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 first dollar coverage, mandatory gap coverage (both the standard benefit for generic drugs and the coverage gap discount program for applicable drugs) and additional gap coverage offered for full and/or partial tiers.

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 2005-2006 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 2005-2006 and 2011. (Because of the timing of availability of data, 2011 year adjustments are used for the 2012 OOPC Module).

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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 will show up in the SAS log while attempting to run the **CIMPORT.SAS** program.

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 FORMDIR = c:\oopc\formulary (correct)
%LET FORMDIR = 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_2012 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_RUN_APR302011.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.

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.

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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

Testing

Before starting a run of the OOPCV1P.SAS program, which may take an hour or more, it may be worth running a test on 25 observations to check that the data and directory locations have been set up correctly. You may use the OBS= Option in this program set to 25 and run the program to check for errors. Output from this run can be ignored.

Before:

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

%LET INPUTDIR = c:\oopc\input;
%LET PROGDIR  = c:\oopc\programs;
%LET PBPDIR   = c:\program files\pbp2012;
%LET FORMDIR  = c:\oopc\formulary;
%LET OUTPUT   = c:\oopc\output\OOPC_RUN1_Apr302011.xls;

OPTIONS OBS=MAX NOCENTER MSGLEVEL = N SUMSIZE = 1000M
BUFNO=6
  SORTPGM=SAS  /* MSGCLASS=I */ NOSORTEQUALS THREADS=YES
NOTES;

OPTIONS NOMPRINT NOSOURCE2;
RUN;
```

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After:

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

%LET INPUTDIR = c:\oopc\input;
%LET PROGDIR  = c:\oopc\programs;
%LET PBPDIR   = c:\program files\pbp2012;
%LET FORMDIR  = c:\oopc\formulary;
%LET OUTPUT   = c:\oopc\output\OOPC_RUN1_Apr302011.xls;

OPTIONS OBS=25 NOCENTER MSGLEVEL = N SUMSIZE = 1000M
BUFNO=6
SORTPGM=SAS  /* MSGCLASS=I */ NOSORTEQUALS THREADS=YES
NOTES;

OPTIONS NOMPRINT NOSOURCE2;
RUN;
```