CENTERS FOR MEDICARE & MEDICAID SERVICES

CY 2021 ENHANCED

PART C BASELINE OUT-OF-POCKET COST MODEL

USER GUIDE

NOVEMBER 2021

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Introduction

The Out-of-Pocket Cost (OOPC) Model is a set of programs used to calculate the estimated OOPCs using a beneficiary sample to determine the value of the benefits being offered by a Plan Benefit Package (PBP). The purpose of this User Guide is to provide Medicare Advantage Organizations (MAO) with the technical information required to generate OOPC values in order to evaluate the changes to the OOPC model. Please note, MAOs will need to calculate their Part C & Part D OOPCs separately and combine them for their total OOPC value.

The **CY 2021Enhanced Part C Baseline OOPC Model** is identical to the Request for Comment (RFC) Part C OOPC Model shared with stakeholder in June 2020. This model uses an expanded set of MCBS sample beneficiaries and their associated utilization data, compared to the utilization included in previous versions of the OOPC Model. The expanded cohort includes beneficiaries whose status is ESRD at any point during the survey year. In addition, beneficiaries with a missing health status are also included. To allow plans the opportunity to gain familiarity with the changes before implementing them for bid review purposes, CMS is making the CY 2021 Enhanced Part C Baseline OOPC Model available to MAOs. Note that the Part D calculations are done in a separate model.

The OOPC Model is designed to enable plan organizations to review benefit structures using the software and data used by CMS to evaluate annual bid submissions. The OOPC Model reports OOPC values by PBP-based service category at the plan level. MAOs are encouraged to review the more comprehensive Methodology document located in the most recently posted Plan version OOPC Model package at

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

Organizations use their own completed 2021 PBP data as input to the software. After the user has successfully input their data for a particular contract/plan into the PBP, and exit/validated the PBP (a given organization may have multiple plans for a given contract), then the data is 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 CY 2021 Enhanced Part C Baseline OOPC Model package (**OOPC2021-Enhanced-Baseline-PartC.zip**) consists of a set of provided input datasets (SAS transport format) and a series of SAS programs. The programs import PBP and utilization data, calculate person-plan-level costs for each service category, summarize the costs to the plan level, and output the results to a plan-level Excel workbook.

This User Guide for the CY 2021 Enhanced Part C Baseline OOPC Model 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: Benefits and the reduction in cost sharing entered in Section B-19 of the PBP that are offered as part of the Value-Based Insurance Design (VBID) model test, Uniformity Flexibility, or Special Supplemental Benefits for the Chronically Ill (SSBCI) continue to be excluded from the model.

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 Total Beneficiary Cost (TBC), please contact https://mabenefitsmailbox.lmi.org/
>
> For Bid Pricing Tool (BPT) questions, please submit questions to actuarial-bids@cms.hhs.gov

Resource Requirements

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

Model Requirements: The Models have been tested on a variety of PCs. The user will need WINZIP (or similar software) to unzip the OOPC model package and storage space to accommodate the downloadable files that total just under 2 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 9.4 on 64-bit machines using Windows Office 16. Microsoft Excel is required for generating and using the model output. Testing has been done using 2016 and 2019 versions of Excel and Access.

Processing Time: The programs that import the various input files will run quickly. The other programs for the Part C calculations incorporate the claims data for several thousand MCBS respondents and apply the cost-sharing structure for each service category. Also, features such as deductibles and plan maximums are taken into account and the costs adjusted. This process is performed for each plan included in the list of plans input into the OOPC run. Running a single or a few plans at a time will shorten the run time.

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

2016/2017 MCBS survey. The UTILIZATION.XPT file contains information on this cohort's utilization as reported by the MCBS survey. The datasets are utilized by the software after they are converted to SAS datasets with a SAS program included in the package (CIMPORT.SAS). Note that there are two additional SAS transport datasets that are included and used to the support the model run, CATEGORY.XPT and FORMATS.XPT.

Input Datasets Provided by the User

Plan List

The user will provide a text file list of the plans to be included in an OOPC run. 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.

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

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.

PBP Data

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. See the PBP System Reference Guide for PBP instructions.

PBP Data Input to OOPC Tool: As part of this bid submission process, the PBP data is automatically stored in an Access database. The OOPC Model reads a plan's PBP data

from the Access database as input. The PBP-created databases required as input to the Model are **PBP2021.MDB** and **PBPPLANS2021.MDB**. The location of these files is a user input in the OOPC software.

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 he or she has received the most up-to-date data entry before running the OOPC Model.

Programs Included in the Software Package

The complete list of SAS Programs utilized by the model 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.

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. Note that this assumes the PBP has already been completed for the plan(s) of interest.

Step 1: Create a text file (**PLANFILE.TXT**) that lists the plans to be used in the OOPC run.

Step 2: Complete the PBP data entry for plans of interest using the PBP software. The resulting files will be named **PBP2021.MDB** and **PBPPLANS2021.MDB**. Make a note of the location of these files: e.g., c:\program files\PBP2021.

Step 3: Set up directory locations for all files.

    a. Copy the file **OOPC2021-Enhance-Baseline-PartC.zip** to a working directory (e.g., **c:\oopc_c**) and unzip its contents to that directory.
    b. In the working directory, extract CIMPORT.SAS and OOPCV1P.SAS to create the **c:\oopc_c\programs** directory for the SAS programs modified by the user.
    c. In the working directory, extract all other programs in the zip file to create the **c:\oopc_c\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_c\output**).
    e. Copy the **PLANFILE.TXT** file to the newly created programs file directory. (e.g., **c:\oopc_c\programs**).

Step 4 : Edit the program **CIMPORT.SAS** as necessary so that the location **(in bold below)** 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_c\input**);
>
> Then run **CIMPORT.SAS**.

For all SAS runs, check the SAS Log 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***:** The SAS CIMPORT program only needs to run once, prior to the first OOPC run.

Step 5: Edit the program **OOPCV1P.SAS** 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. Finally, edit the program to identify the location and name of the output spreadsheet file. The output spreadsheet name can be changed as necessary.

For example, in the "**OOPC** =&OUTPUT.**OOPC_RUN**&file_date." 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_c\input**; |
> | %LET PROGDIR = | **c:\oopc_c\programs**; |
> | %LET PBPDIR = | **c:\ pbp2021**; |
> | %LET PLANFILEDIR = | **c:\oopc_c\programs;** |
> | %LET OUTPUT = | **c:\oopc_c\output;** |
>
> %OOPCV1M(RUNYEAR   =2021,
>   INP   =IN1.PERSON,
>   INC   =IN1.UTILIZATION,
>   CATEG   =IN1.CATEGORY,
>   PBP   =&PBPDIR,
>   PLANFILE   =&PLANFILEDIR\PLANFILE.TXT,
>   **OOPC**   =&OUTPUT.**OOPC_RUN**&file_date..xlsx);

Then run **OOPCV1P.SAS**.

When checking the SAS Log for the run, the run time is determined 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 (.xlsx) will be written to 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. **Total** displays the sum of the categories.

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

Plan_Name	Benefit_Year	Inpatient_Hospital_Acute_Car	Emergency/Post-Stabilization_Servic	Preventative_Denta	Comprehensive_Denta	Total	PartD	Grand_Total	PBP_Version_Date
RFB MA-PD A/B Full Network EA (PFFS)	2021	1.892246835	3.232286335	5.474742884	9.507833393	77.67573702	79.85772893	157.5334659	12FEB2020:09:02:14
RFB MA-PD A/B DS (HMO-POS)	2021	3.408045801	3.065460663	5.556109325	20.44281657	109.4218335	132.4860344	241.907868	12FEB2020:09:08:10
1876 MA-Only A/B (Cost)	2021	36.37428986	0	25.40107671	27.65318663	162.6271559	324.819	487.4461559	12FEB2020:09:10:46
RFB MA-PD A/B Partial Network AE (PFFS)	2021	16.24279214	2.711473679	25.40107671	27.65318663	135.9631215	79.85772893	215.8208504	12FEB2020:09:12:30
MA-PD A/B SNP Chronic/Disabling EA (HMO-P(	2021	2.116594058	3.362124369	9.274605306	19.87363791	100.0687408	79.85772893	179.9264697	12FEB2020:09:33:51
MA-PD A/B Full Network BA (PFFS)	2021	4.916764986	3.20678818	5.462566991	9.446472413	91.43793628	132.4860344	223.9239707	12FEB2020:09:36:20
MA-Only A/B Full Network (MSA)	2021	30.79947193	0	11.88385235	17.09297926	94.74392338	296.5164295	391.2603529	12FEB2020:09:36:32
RFB MA-PD A/B DS (PPO)	2021	14.14056877	2.005553684	25.40107671	27.65318663	183.8391299	79.85772893	263.6968588	12FEB2020:09:42:28
MA-PD A/B EA (PPO)	2021	13.35370566	1.885422762	25.40107671	27.65318663	188.9655892	107.4453955	296.4109847	12FEB2020:10:37:11
RFB MA-PD A/B DS (HMO)	2021	3.483609845	3.207242736	5.463269421	9.449375795	79.03421057	132.4860344	211.520245	12FEB2020:10:36:49
MA-PD A/B BA (Regional PPO)	2021	13.05527641	2.893397038	5.556109325	20.44281657	166.614726	132.5286085	299.1433345	12FEB2020:10:41:34
PD-Only EA (PDP)	2021						142.0362582	142.0362582	12FEB2020:08:42:01

Note: The plan level deductible category allocation is not displayed. The plan deductible is allocated proportionately to each individual category estimates as appropriate.

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 and change the PLANFILE.TXT.

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

Label Used in Output Files	Detailed Heading/Description
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 OOPC Value
Emergency/Post-Stabilization_Services	Emergency/Post-Stabilization Services OOPC Value
Urgently_Needed_Services	Urgently Needed Services 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
Ambulatory_Surgical_Center	Ambulatory Surgical Center (ASC) Services OOPC Value
Chemotherapy/Radiation_Drugs	Chemotherapy/Radiation Drugs OOPC Value
Ambulance	Ambulance Services OOPC Value
Durable_Medical_Equipment	Durable Medical Equipment OOPC Value
Prosthetic_Devices	Prosthetics and Other Medical Supplies OOPC Value
Renal_Dialysis	End-Stage Renal Disease Services OOPC Value
Diabetes_Education	Diabetes Education OOPC Value
Medicare_Covered_Part_B_Drugs	Medicare Part B Rx Drugs and Home Infusion Drugs OOPC Value
Preventative_Dental	Preventive Dental OOPC Value
Comprehensive_Dental	Comprehensive Dental OOPC Value
Eye_Exams	Eye Exams OOPC Value

Label Used in Output Files	Detailed Heading/Description
Hearing_Exams	Hearing Exams OOPC Value
Opioid_Treatment_Programs	Opioid Treatment Programs OOPC Value
Total	Total Costs (Excluding Part D Drugs and including calculated plan deductible)
PBP_Version_Date	PBP Version Date

Contents of the ZIP File (OOPC2021-Enhance-Baseline-PartC.zip)

ANNUALIZATION.SAS
BASEID_PLAN_YEAR.SAS
CATEGORY.XPT
CIMPORT.SAS
CLEANUP.SAS
CONVERT.SAS
COST_SHARING_AMBULANCE.SAS
COST_SHARING_ASC.SAS
COST_SHARING_CARDIAC_REHAB.SAS
COST_SHARING_CHIROPRACTIC.SAS
COST_SHARING_COMPREHENSIVE_DENTAL.SAS
COST_SHARING_COMP_XRAY.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_OPIOID.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
formats.xpt
MISSING_CELLS_YEAR.SAS
OOPCV1M.SAS
OOPCV1P.SAS
PBPCATS.SAS
PBP_IMPORT.SAS
PBP_IMPORT_CMS.SAS
PERSON.XPT
PLAN_CATNAME_NEW.SAS
PLAN_DEDUCTIBLE.SAS
PLAN_LEVEL.SAS
UTILIZATION.XPT

Troubleshooting

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

Wrong or Missing Directory Locations

If an input directory is does not exist, the following type of error can show up in the SAS log while attempting to run the **CIMPORT.SAS.**

> **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_c\input\person.xpt**

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

> %LET DIR = c:\oopc_c\input (correct)
> %LET DIR = c:\oopc_c\inp (incorrect)
>
> **ERROR: Library INP does not exist.**

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_2021 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_c\output\OOPC_RUN2021V1_20210515.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 C Output Expected, but Blank or Zeroes

When you have completed your PBP data entry, make sure you have <u>exit/validated</u> from the program.

Running the Model Using an Older Version of SAS

The OOPC has been developed and tested using SAS 9.4. Prior versions of SAS may not support all the functions and procedure used in the software.