CMS

2012 OUT-OF-POCKET COST MODEL METHODOLOGY

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Table of Contents

1. Introduction

This document describes the general methodology behind the calculations used for plan-level estimates produced by the Out-of-Pocket Cost (OOPC) Model and available on the Medicare website. It describes the original methodology used in the 2011 Medicare Plan Finder (Medicare Options Compare) OOPC calculations. The 2012 estimates produced by the OOPC Model are calculated in the same way as 2011 except that the 2012 Model estimates use submitted 2012 PBP and formulary data. The other major difference is that the Medicare Plan Finder displays OOPCs according to self-reported health status of beneficiaries. In contrast, the OOPC Model reports OOPCs by PBP-based service category at the plan level. The detailed description of how the OOPC Model is structured, and how plan submission data is input for estimation, is provided in the CY*2012 OOPC Model User's Guide,* dated April 2012. This User's Guide also describes the format of the output, which is displayed at the plan level by PBP-based category.

The Centers for Medicare & Medicaid Services (CMS) originally defined and developed the process, data sources, and algorithms necessary to populate the 2011 Medicare Options Compare (MOC) Out-of-Pocket Cost (OOPC) database for Original Medicare (OM), Medicare Advantage with Prescription Drug (MA-PD), Medicare Advantage Only (MA-Only) and Medigap plans. Working with the Center for Medicare (CM), Center for Strategic Planning (CSP), and the Office of the Actuary (OACT), Fu Associates, Ltd. defined a cohort of OM individuals based on the 2005 and 2006 Medicare Current Beneficiary Surveys (MCBS).

This nationally representative cohort provides the basis used to identify the utilization measures and OOPC estimates. The Medicare Current Beneficiary Survey (MCBS) events and claims for the designated cohort were reviewed to develop the beneficiaries' utilization measures and estimate OOPCs under plan-submitted benefit structures.

Where necessary, the out-of-pocket costs reflect the 2011 costs using inflation factors provided by OACT; in general, costs were inflated based on service-based inflation factors. Part D outpatient drug calculations applied average prices from the Medicare Prescription Drug Event (PDE) claims data (2010). Plans use their Contract Year (CY) 2012 Plan Benefit Packages (PBPs) to define the OOPCs associated with their CY 2012 plans.

The OOPC model provides estimates for as many PBP Medicare-Covered and Mandatory Supplemental benefits as possible. As described below, the OOPC calculations are derived from the actual events and claims data taken from the MCBS data. The OOPC calculations include several Mandatory Supplemental benefits because the MCBS data includes claims/charges for these items. These benefits include:

- Additional days for Inpatient Acute Care, Inpatient Mental Health, and SNF

- Non-Medicare-covered stays for Inpatient Acute Care, Inpatient Mental Health, and SNF
- Preventive and Non-Medicare-covered Comprehensive Dental Costs
- Non-Medicare-covered Hearing
- Non-Medicare-covered Vision Exams
- Non-covered Prescription Drugs.

However, Medicare Advantage plans offer other benefits that are not included in the out-of-pocket costs calculations because claims data are insufficient or do not exist. Some examples of the benefits are:

- Foreign Travel Emergency
- Transportation
- Acupuncture
- Hearing services not usually covered by Medicare (including Hearing Aids)
- Vision services not usually covered by Medicare (including Eye Wear due to the absence of claims)
- Prevention screening services not covered by Medicare
- Chiropractic services not usually covered by Medicare
- Podiatry services not usually covered by Medicare.

2. Selection of the Cohort Based on the 2005 and 2006 MCBS

Fu Associates, Ltd. reviewed the variables in the 2005 and 2006 MCBS files and used this information to develop an Original Medicare (OM) cohort. The OM cohort provides the baseline from which the OOPC estimates were developed. Appendix A provides a basic description and record counts for the MCBS files used.

2.1 Screening Process

Certain criteria were used to either include or exclude beneficiaries in the Original Medicare OM cohort. As development of accurate out-of-pocket estimates require the availability of all utilization during the year, beneficiaries who did not meet certain criteria were excluded from the final cohort. Dual eligible beneficiaries are not excluded from the cohort, as long as they pass the other screening criteria. However, as noted in Section 3.2, caution should be used for OOPC estimates calculated for Special Needs Plans that only support Dual Eligible beneficiaries.

The following screening criteria were used to establish the final cohort:

1. Beneficiaries interviewed in a facility were excluded from the cohort due to potentially insufficient utilization data;
2. Beneficiaries, whose health status was missing, were excluded from the cohort because they could not be mapped into a health status category;
3. Beneficiaries who were not enrolled in Medicare Parts A & B for all twelve months in 2005 or 2006 respectively, or until death, were excluded from the cohort due to potentially insufficient utilization data;
4. Beneficiaries with one or more months of Medicare Managed Care enrollment were excluded from the cohort due to potentially insufficient utilization data;
5. Beneficiaries with a Medicare status of End-Stage Renal Disease (ESRD) were excluded from the cohort due to the inability to join an MA-PD or MA plan;
6. Beneficiaries with hospice utilization were excluded from the cohort since the payment for these beneficiaries is based on excess savings and not a capitated rate;
7. Beneficiaries who did not complete the entire survey were excluded from the cohort due to potentially insufficient data;
8. Beneficiaries with Veterans Administration (VA) insurance were excluded from the cohort due to potentially insufficient utilization data; and
9. “Ghosts,” or beneficiaries newly enrolled in Medicare in 2005 or 2006 with claims and imputed survey data, were excluded from the cohort because their utilization duplicated that of other beneficiaries included in the cohort.
10. Beneficiaries who died during the year but met all other criteria were included in the final cohort. Managed Care (now referred to as Medicare Advantage) Organizations price their insurance based on the assumption that some beneficiaries will die during the year and have higher utilization than average. Therefore, beneficiaries who died during the year were included in the calculation of OOPCs.

11. Beneficiaries newly enrolled in Medicare during the year were not included in the final cohort. These beneficiaries may have generated Medicare claims during the year, but they were not part of the survey process; their survey data had to be imputed using data for beneficiaries who were enrolled during the entire year. The data for these new enrollees, therefore, do not represent their utilization but rather the utilization of other beneficiaries. As a result, these beneficiaries were not included in the calculation of OOPCs.

2.2 Screening Results

The number of beneficiaries excluded from each cohort as a result of the screening criteria is provided in the following tables.

TABLE 2.1 - SCREENING RESULTS 2005 MCBS

Screening Criteria	Number of Beneficiaries Excluded
Beneficiaries who did not complete at least one community interview	1,715
Beneficiaries interviewed in a facility	778
Beneficiaries with a health status other than E, VG, G, F, and P	48
Beneficiaries with less than 12 months of Part A/B enrollment	861
Beneficiaries with some MA-PD or MA coverage	2,570
Beneficiaries with ESRD status	90
Beneficiaries with one or more hospice payments	180
Beneficiaries with an incomplete survey	1,006
Beneficiaries with VA insurance	708
Ghost beneficiaries	685
Total number of beneficiaries excluded	4,381*

***** Note**:** The criteria used to screen beneficiaries from the final cohort were NOT mutually exclusive

TABLE 2.2 - SCREENING RESULTS 2006 MCBS

Screening Criteria	Number of Beneficiaries Excluded
Beneficiaries who did not complete at least one community interview	1,722
Beneficiaries interviewed in a facility	790
Beneficiaries with a health status other than E, VG, G, F, and P	60
Beneficiaries with less than 12 months of Part A/B	897

TABLE 2.2 - SCREENING RESULTS 2006 MCBS	
Screening Criteria	**Number of Beneficiaries Excluded**
enrollment	
Beneficiaries with some MA-PD or MA coverage	3,069
Beneficiaries with ESRD status	107
Beneficiaries with one or more hospice payments	186
Beneficiaries with an incomplete survey	1,003
Beneficiaries with VA insurance	689
Ghost beneficiaries	696
Total number of beneficiaries excluded	4,791*

***** Note***:*** The criteria used to screen beneficiaries from the final cohort were NOT mutually exclusive.

2.2.1 Final Original Medicare Cohort

Of the 11,089 beneficiaries in the 2005 MCBS file, 6,708 were retained in the final cohort that populates the OOPC development database. Of the 11,048 beneficiaries in the 2006 MCBS file, 6,257 beneficiaries were used to populate the database. Combined, the final OM cohort thus consists of 12,965 beneficiaries. The following table shows the number of beneficiaries in the Medicare OM cohort by health status.

TABLE 2.3 – 2005/2006 ORIGINAL MEDICARE BENEFICIARIES IN COHORT BY HEALTH STATUS						
Health Status	**Excellent***	**Very Good**	**Good***	**Fair**	**Poor***	**TOTAL**
Number of Beneficiaries	**1,771**	**3,563**	**4,185**	**2,426**	**1,020**	**12,965**

* Note: The three self-reported health status groups with the asterisks are used for display on the MOC.

Data for all 12,965 beneficiaries in the OM cohort was used to develop the baseline utilization measures and OOPC estimates. According to past CMS analysis, the OM cohort is large enough to be nationally representative of the Medicare population in the MCBS (e.g., beneficiaries who are enrolled in both Parts A and B; beneficiaries who are not enrolled in managed care).

3. Development of Out-of-Pocket Cost Estimates

The following assumptions were made as a result of ongoing analysis of MCBS and PBP data, and CMS requirements to design and develop OOPC estimates. These assumptions provide a baseline of the out-of-pocket design and development process and will be modified as the process is refined.

3.1 General Assumptions

1. Actual OOPC estimates are displayed in dollar values. OOPC estimates are displayed as average "Monthly" estimates and were calculated based on the number of months enrolled for each beneficiary in the cohort.
2. MCBS events and claims for the designated cohort were reviewed to develop the beneficiaries' utilization measures and estimate OOPCs.
3. MCBS sample weights were applied to each of the beneficiaries included in the final cohort as part of the development of the OOPCs for MA-PD or MA plans.
4. The 2005 and 2006 costs for Physician/Supplier events were inflated to 2011 costs using Berenson-Eggers Type of Service (BETOS) code inflation factors; all Health Care Procedure Codes (HCPCs) within a BETOS code are inflated by that same BETOS rate. These inflation factors were provided by OACT.[1] Long-term care costs were not included in the development of the OOPC estimates.
5. Skilled Nursing Facility (SNF) services were included in the development of the OOPC estimates.
6. Multiple records exist in the MCBS Record Identification Code (RIC) files that contain the same values for all data fields. According to CMS/CSP, one of the perverse elements of a medical expenditure survey, such as the MCBS, is that the interview is frequently most demanding for those who are the sickest, since the interview length is dependent upon the amount of medical utilization reported. To reduce the reporting burden, the MCBS design allows individuals to report repeated utilization in a summary manner. For example, if an individual has physical therapy multiple times a week for several weeks, MCBS captures the utilization in summary form. This summary data was used to generate the correct number of events as part of the back-end processing. Often events generated from summary data appear to be duplicates, since each event will have the same begin and end date. These records are not mistakes; rather, they demonstrate how repeat utilization was collected and processed. As such, the information was included in the analysis.
7. The event-level data in the Medical Provider Event (MPE) file was not used because the previous data provided limited information for mapping an event to a PBP benefit.

1. See Appendix B.

3.2 Assumptions Related to the Calculation of MA-PD or MA Out-of-Pocket Cost Estimates

1. Where applicable, the calculations used the PBP cost shares for in-network services to calculate OOPC estimates for benefits.
2. If the PBP cost sharing used coinsurance (i.e., percentages), the coinsurance basis is the reported MCBS Total Amount.
3. The costs for Optional Supplemental benefits were not included in the calculation of OOPCs.
4. Information collected in the PBP Notes fields is not included in the calculation of OOPCs.
5. Utilization of Outpatient services, Physician/Supplier services, and DME benefits was mapped into a PBP service category based on the information provided on the bill. In most instances, services that occurred on the same day and appeared to be related were linked together into a single benefit.
6. The calculation applies the service-category deductibles to annualized costs.
7. For benefits with a minimum and maximum cost share, the minimum cost share amount was used to calculate the OOPC estimate.
8. The calculation of the category cost equals the sum of the co-pay amount, plus the coinsurance amount, plus the category deductible.
9. If a plan indicates there is a service-category specific deductible amount, then that deductible amount is used to reduce the total costs for calculating the cost shares, and then added back in to determine the total cost for the category.
10. If a plan indicates that there is a service-category specific maximum enrollee out-of-pocket amount, then the calculated MA-PD or MA cost for that category was compared to the service category specific maximum, and the lesser of the two was used as the OOPC. For example, if the beneficiary's calculated OOPC for lab services totals $600, but the plan limits the enrollee's OOP cost to $500, then the OOPC estimate uses the $500 rather than the $600.
11. If a plan indicates that there is a plan-level maximum enrollee out-of-pocket amount applicable for *all* PBP service categories, then the calculated MA-PD or MA cost for the overall plan was compared to the plan-level maximum, and the lesser of the two was used as the OOPC.[2] This calculation was applied to Medicare-covered or all benefits, as designated by the plan. If a separate maximum amount was indicated for Medicare-covered benefits, then this amount was compared to the total costs for Medicare-covered benefits, and the lesser of the two was used.
12. If a plan indicates that there is a plan-level maximum enrollee out-of-pocket amount, applicable for *a designated subset* of PBP service categories, then the calculated MA-PD or MA cost for the subset of PBP service categories was compared to the plan-level maximum, and the lesser of the two was used as the OOPC for the designated subset of PBP service categories. For example, if the beneficiary's

2. If a plan has a maximum that applies to both in- and out-of-network services then this maximum is used in the calculations.

calculated OOPC for all services except prescription drugs and dental services totals $1,300, but the plan-level maximum enrollee out-of-pocket amount limits the OOP cost for all services except prescription drugs and dental services to $1,000, then the plan OOPC estimate equals the $1,000 limit plus the service-category specific costs for drugs and dental services. This calculation was applied to Medicare only or all benefits, as designated by the plan. If a separate maximum amount was indicated for Medicare only benefits, then this amount was compared to the costs for Medicare only benefits, and the lesser of the two was used.

13. If a plan indicates that there is a plan-level deductible amount, then this deductible amount is used to reduce the total amount for services that is subject to cost sharing, and the deductible (or portion used) is included in the out-of-pocket costs calculated for each beneficiary.[3]
14. If a service/benefit is covered by Medicare ("allowed"), then it was included in the calculation. If a service/benefit is not covered by Medicare ("denied"), then it was excluded from the calculation.
15. If a plan is a Dual Eligible Special Needs Plan (SNP), OOPCs can be estimated. However, because selected MCBS cohorts do not reflect the typical utilization of dual-eligible, beneficiary organizations should refer to CMS policy guidance, such as the Call Letter and HPMS Memos, to understand the meaningful difference and total beneficiary cost requirements for D-SNPs.

3.2.1 Service Category Specific Assumptions for Calculation of Out-of-Pocket Cost Estimates

Inpatient Hospital

The calculation of the OOPC estimate for the Inpatient Hospital-Acute and Inpatient Psychiatric Hospital Service Category benefits were based on the following assumptions:

1. Each event in the MCBS Inpatient Event (IPE) file is considered one hospital stay.
2. MCBS events with a source of "Survey only" are excluded from the analysis.
3. Inpatient Psychiatric Hospital stays were identified using the Provider Number on the claim.
4. Inpatient Psychiatric Hospital costs were calculated separately in the MA-PD or MA OOPC estimates.
5. The MCBS Total Expenditures are equal to the total charge for the hospital stay.

3. The OOPC calculations are made for In-Network benefits because the MCBS claims data are sampled from the Fee-for-Service population where the network concept is not applicable. All In-Network deductibles are applied in the calculations. However, there are some plans that do not have an In-Network deductible but have a Combined deductible. In this situation, rather than assuming that the deductable is zero, the value of the Combined (In- and Out-of-Network) deductible is used in the calculation (in place if the missing In-Network deductible).

6. Total Days were calculated as the Discharge Date minus the Admission Date. If the dates are the same, then Total Days are equal to one.
7. The MCBS Utilization Days were defined as the covered days (1-90) during a benefit period and any MCBS lifetime reserve days used during that stay.
8. Medicare Covered Days were calculated as Utilization Days minus the Lifetime Reserve Days.
9. Additional Days were calculated as Total Days minus the Utilization Days.
10. If Utilization Days were greater than zero, then the stay was considered Medicare covered.
11. If Additional Days were equal to zero, then the entire stay was considered Medicare covered.
12. Lifetime reserve days were considered Medicare covered under OM, but were priced as Additional Days or Non-Covered Days under MA.
13. Plan Maximum Additional Days were covered by the plan (but not by Medicare) and designated as unlimited days or as a specified number of days.
14. If Utilization Days are equal to zero, then the entire stay was considered non-covered and the non-covered cost was equal to the Total cost.
15. Non-Covered Days are equal to Additional Days minus the Plan Maximum Additional Days.

Inpatient Hospital Service Category

The MA-PD or MA calculation of the OOPC estimate for the Inpatient Hospital Service Category benefits is defined according to the following algorithms:

1. If the Maximum Enrollee OOPC amount was designated for a period other than a per stay cost, then it was converted to an annual cost.
   - If the Plan Benefit Package (PBP) periodicity is the benefit period, then it was assumed that the 90-day period is quarterly and it was multiplied by four.
2. If the Maximum Enrollee OOPC amount was based on a per stay cost, then the annual out-of-pocket expenses were equal to the Maximum Enrollee OOPC multiplied by the Number of Stays (i.e., events).
3. For Medicare covered stays, the cost shares were calculated in the following manner:
   - The Co-pay per Stay amount was added to the total of the Co-pay per Day multiplied by the Number of Medicare covered Days; and/or
   - The Coinsurance Percent per Stay was multiplied by the Total Amount, and added to the total of the Coinsurance Percent per Day multiplied by the Amount per Day (equal to the Total Amount divided by the Total Number of Days), and then multiplied by the Number of Medicare Covered Days.
4. For Additional Days, the cost shares were calculated in the following manner:
   - The Number of Additional Days was multiplied by the Additional Days Co-pay per Day; and/or

- The Number of Additional Days was multiplied by the Additional Days Coinsurance Percent per Day, which was then multiplied by the Amount per Day for Additional Days (the number of days must be less than or equal to the Number of Plan Maximum Additional Days).
- The Co-pay per Day for Additional Days was multiplied by the Number of Additional Days; and/or
- The Coinsurance Percent per Additional Days was multiplied by the Amount per Day and then multiplied by the Number of Additional Days.

5. For Non-Covered Stays, if the benefit is not Mandatory, the total cost was calculated in the following manner:
   - The Number of Excess Non-Covered Days was multiplied by the Amount per Day.
6. For Non-Covered Stays, if the benefit is Mandatory, the cost shares were calculated in the following manner:
   - The Co-pay per Stay, plus the Co-pay per Day was multiplied by the Number of Days; and/or
   - The Coinsurance Percent per Stay was multiplied by the Total Amount and added to the total of the Coinsurance Percent per Day multiplied by the Amount per Day and then multiplied by the Number of Days.
7. Out-of-pocket expenses are equal to the Total Non-Covered Costs (including deductible) plus the minimum of either:
   - The Total Cost calculated using the Per Stay Amount plus the Per Day Amount; or
   - The Maximum Enrollee OOPC.

Prescription Drugs

The calculation of OOPC estimates for the Part D outpatient drug category is based on the following assumptions and procedures. Appendix C provides a listing of the key parameters that will be used in the calculations for the basic type of MA-PD and PDP drug plans for 2012. Another description of the Part D drug estimates is provided in the 2012 OOPC Model User's Guide.

1. Each event in the 2005 and 2006 MCBS PME (i.e., Drug) file is considered one drug prescription. MCBS drug prescriptions are adjusted using OACT-provided survey underreporting of drug prescription counts to estimate total drug usage in 2011.[4]
2. Map each MCBS prescription by its drug name to a National Drug Code (NDC). Then, using a 2009 Proxy NDC-NDC crosswalk, the drugs are mapped in NDC

4. The prescription utilization adjustment for 2005 and 2006 MCBS data includes an initial underreporting adjustment and subsequent adjustments for increased usage up to the estimate year of 2011. The 2006-2011 utilization adjustment is: 1.19; the 2005-2011 utilization adjustment is 1.36.

proxy codes. A crosswalk between NDC proxies and Concept Unique Identifier (RXCUI) codes is then applied in order to map MCBS drugs to the 2011 RXCUI formularies. 2009 Prescription Drug Event (PDE) claims data was used to determine a representative average price for each prescription according to its RXCUI code.

3. Drugs that could not be mapped to an NDC proxy (and thus to an RXCUI code) were considered over-the-counter, non-prescription drugs and their costs were not included in OOPCs.
4. For MA-PD and PDP plans, each drug was mapped to a plan's formulary to obtain drug tier information. The RXCUI code in the lowest tier was selected.
5. The calculations also used generic substitution information as provided by Destination Rx to replace brand prices and associated copayments with those of their generic substitutes.
6. The full cost of Part D-covered drugs not found on a plan's formulary was added to a plan's OOPC estimate.
7. The cost sharing (deductible and drug cost) for each beneficiary in any of the four Part D plan types (DS, BA, EA, AE) using PBP data was applied.
8. The calculation followed the Medicare Drug Plan Finder protocols for sorting drugs and assigning cost sharing at the various thresholds (deductible, initial coverage limit (ICL), catastrophic).
9. Additional plan features were incorporated, such as first dollar coverage and gap coverage, into the calculations. The legislated 2012 discounts for brand and generic drugs in the gap are also included.
10. Additional Assumptions for MA-PD and PDP Plans:
    - Calculations are for one-month supply of either In-Network Pharmacy, or In-Network Preferred Pharmacy, or In-Network Non-Preferred Pharmacy.
    - Low-income cost sharing is not to be included in the calculations. Each beneficiary's out-of-pocket costs were estimated under each MA-PD or PDP plan in the PBP data.
11. Finally, costs were averaged across each plan and the Part D premium (if applicable) for each plan was added.

Dental

The calculation of the OOPC estimate for the Dental Service Category benefits was based on the following assumptions.

1. Each event in the MCBS Dental Utilization Events (DUE) file was considered to be one visit.
2. All DUEs in this file were considered to be non-Medicare covered.
3. Each DUE is mapped to a PBP dental benefit, and the appropriate benefit cost share is applied:
    - Exam = Oral Exam;

- Filling = Restorative;
- Extraction and Root Canal = Endodontics;
- Crown, Bridge, Ortho, and Other = Prosthodontics;
- Cleaning = Cleaning; and
- X-rays = X-rays.

4. If the plan offers dental benefits as a Mandatory benefit, then the PBP co-pay and coinsurance cost share amounts were applied to the appropriate utilization.
5. If the plan's dental benefit was an Optional benefit, or if the plan did not offer a dental benefit (i.e., it is missing in the PBP data), then the total charge is equal to the Total Expenditures.
6. Preventive Dental benefits include oral exams, cleanings, and X-rays.
7. Comprehensive Dental benefits include restorative, endodontics, and prosthodontics.
8. If an event includes more than one Dental service, then the cost per service equals the Total Amount, divided by the number of services.
9. If a plan does not cover a particular Dental service (e.g., cleaning), then the cost of that service equals the calculated cost per service.
10. If the plan has a Maximum Enrollee Cost amount for Preventive Dental services, then the beneficiary cost equals the minimum of the sum of the non-Medicare covered costs or the Maximum Enrollee Cost Amount.
11. If the plan has a separate Maximum Enrollee Cost amount for Medicare-covered dental services, then the beneficiary cost equals the minimum of the sum of the Medicare-covered dental costs or the Maximum Enrollee Cost Amount.
12. If there was no Maximum Enrollee Cost amount, then the beneficiary cost is equal to the sum of the Preventive and Comprehensive Dental costs.

Skilled Nursing Facility (SNF)

The calculation of the OOPC estimate for the SNF Service Category benefits was based on the following assumptions.

1. Each event in the MCBS Skilled Nursing Home Utilization file was considered one SNF stay.
2. MCBS events that have a source of “Survey only” were excluded from the analysis.
3. The MCBS Total Expenditures equal the total charge for the SNF stay.
4. Total Days were calculated as the Discharge Date minus the Admission Date. If the dates were the same, then Total Days equal one.
5. The MCBS Utilization Days were defined as covered days (1-100) during a benefit period.
6. Medicare covered Days were calculated as Utilization Days.
7. Additional Days were calculated as the Total Days minus the Utilization Days.

8. If Utilization Days were greater than zero, then the stay was considered Medicare covered.
9. If Additional Days were equal to zero, then the entire stay was considered Medicare covered.
10. Plan Maximum Additional Days are days that are covered by the Plan (but not by Medicare), and were designated by the plan as Unlimited Days or a plan specified number of days.
11. If Utilization Days equal zero, then the entire stay was considered non-covered and the non-covered cost equals the Total Cost.
12. Non-covered days equal Additional Days minus the number of Plan Maximum Additional Days.

SNF Service Category algorithms

The MA-PD or MA calculation of the OOPC estimate for the SNF Service Category benefits was defined according to the following algorithms:

1. If the Maximum Enrollee OOPC is not a per-stay cost, it was converted to an annual cost.
2. If the Maximum Enrollee OOPC is based on per stay, then the annual out-of-pocket expenses equal the Maximum Enrollee OOPC, multiplied by the Number of Stays.
3. For Medicare Covered Stays, if Utilization Days are greater than zero, then the cost shares were calculated in the following manner:
   - The Co-pay per Stay plus the Co-pay per Day was multiplied by the Number of Medicare covered Days; and/or
   - The Coinsurance Percent per Stay was multiplied by the Total Amount, and added to the total of the Coinsurance Percent per Day multiplied by the Amount per Day (equal to the Total Amount divided by the Total Number of Days), which was then multiplied by the Number of Medicare covered Days.
4. For Additional Days, the cost shares were calculated in the following manner:
   - The Number of Additional Days was multiplied by the Additional Days Co-pay per Day; and/or
   - The Number of Additional Days was multiplied by the Additional Days Coinsurance Percent per Day, and then multiplied by the Amount per Day.
5. For Additional Days, if Additional Days are less than or equal to the Number of Plan Maximum Additional Days, then the cost shares were calculated in the following manner:
   - The Co-pay per Day for Additional Days was multiplied by the Number of Additional Days; and/or
   - The Coinsurance Percent per Additional Day was multiplied by the Amount per Day, and then multiplied by the Number of Additional Days.
6. For Non-Covered Stays, if the benefit is not Additional or Mandatory, then the total cost was calculated in the following manner:

- The Number of Excess Non-Covered Days was multiplied by the Amount per Day.

7. For Non-Covered Stays, if the benefit is Additional or Mandatory, then the cost shares were calculated in the following manner:
   - The Co-pay per Stay plus the Co-pay per Day was multiplied by the Number of Days; and/or
   - The Coinsurance Percent per Stay was multiplied by the Total Amount, and added to the total of the Coinsurance Percent per Day multiplied by the Amount per Day, and then multiplied by the Number of Days.
8. Out-of-Pocket expenses equal Total Non-Covered Costs (including deductible), plus the minimum of either:
   - The total cost calculated using the per stay amount plus the per day amount; or
   - The Maximum Enrollee OOPC.

4. Utilization-to-Benefits Linking Approach

The conceptual approach to linking MCBS/MPE data to the services/benefits in the PBP was based on the understanding that the majority of MA-PD or MA organizations cost their benefits and services based on the Type of Service and/or the Place of Service. For the purpose of estimating OOPCs, this has been referred to as a "Day-Door Theory." This theory assumes that all the benefits/services received by a beneficiary when he/she enters a "single door" (i.e., the facility or location where the services are provided) on a single day are bundled together for a single co-pay amount (e.g., an outpatient surgery that includes lab tests and X-rays would all be provided for a single co-pay amount).

The following steps represent the basic approach taken to link claims and/or line items in the Outpatient, DME, Home Health, and Physician/Supplier file to PBP services/benefits. This approach does not apply to Dental or Prescription Drug event files where the linking was self-contained to specific procedures or records. In the case of the Dental event file, procedure-based dental events were linked to PBP services/benefits with little difficulty. Prescription Drugs were also independent of the line item-to-PBP linking approach; it was assumed that there is one record per drug event.

The approach for linking utilization-to-PBP services/benefits includes the following steps:

1. All of the utilization files (Outpatient, DME, Home Health, and Physician/Supplier) were subset to include only the records for the beneficiaries in the cohort.
2. The claims in the Outpatient file were subset based on the specifications provided below and assigned to each applicable PBP service/benefit.
   - All claims were assigned based on Bill Type code or Revenue Center code, depending upon prioritization (e.g., Bill Type code is equal to Ambulatory Surgical Center; Revenue Center code is equal to Emergency Room).
3. The line items in the DME file were subset based on the specifications provided below and assigned to each applicable PBP service/benefit.
   - All line items were assigned based on the BETOS code (e.g., BETOS code is equal to Hospital bed).
4. The line items in the Physician/Supplier file were subset based on the specifications provided below and assigned to each applicable PBP service/benefit.
   - All line items were assigned based on one or more BETOS codes, Physician Specialty Codes, Service Type, and/or Place of Service, depending upon prioritization (e.g., BETOS code is equal to Ambulance).
5. All other line items that occur on the same date were extracted.
6. The entire set of same day line items were reviewed to:
   - Identify and map line items to the specified Service Category (e.g., Ambulance);

- Identify and map related line items that occurred on the same day and were bundled into the same service, but for which no separate MA-PD or MA cost will be calculated (e.g., Physician Specialty is equal to Ambulance Service Suppliers and BETOS code is equal to Local or Undefined Codes);
- Identify and map line items to another PBP Service Category (e.g., all line items that fall within the admission and discharge dates for an Inpatient Hospital stay and where PLACE OF SERVICE code is equal to Inpatient Hospital will be bundled into the PBP 1a - Inpatient Hospital Service Category); and
- Determine if any line items should be reclassified.

7. The mapping identification for each line item in the file was maintained.
8. The analysis by Service Category was repeated to map all possible line items. Line items were reclassified, as required.

4.1 PBP Service Categories to DME Line Item Mapping

The next several sections describe the mapping of claims, as reported from the 2005-2006 MCBS utilization data to the PBP-based categories used to carry out the estimation of the OOPCs. These sections describe the mapping strategy carried out for the 2011 PBP. A subsequent document will update and describe the 2012 PBP mapping.

Ten PBP services/benefits were addressed as part of this analysis. These include Physician Specialist, Outpatient Labs, Outpatient X-Rays, Outpatient Hospital, Durable Medical Equipment (DME), Prosthetics/Orthotics, Renal Diseases, Part B Medicare-Covered Drugs, Part B Chemotherapy Drugs, and Medical/Surgical Supplies. The mappings for these PBP services/benefits (the number in the parentheses identifies the PBP service category) to line items in the DME file are presented below.

Physician Specialist (7d)

All line items where the BETOS code is equal to “Specialist-Ophthalmology”, “Minor Procedures”, “Office/Home visit”, “Office visits – new”, or “Consultations” were mapped to the Physician Specialist (7d) service category.

Outpatient Labs (8al)

All line items where the BETOS code is equal to “Lab tests – other (non-Medicare fee schedule)” were mapped to the Outpatient Labs (8al) service category.

Outpatient X-Rays (8bx) [Selected Services]

All line items where the BETOS code is equal to “Standard imaging - chest” or “Standard imaging – musculoskeletal” were mapped to the X-Ray (8bx) service category.

Outpatient Hospital (9a)

All line items where the BETOS code is equal to “Hospital visit – initial” or “Hospital visit – subsequent” were mapped to the Outpatient Hospital (9a) service category.

Durable Medical Equipment (DME) (11a)

All line items where the BETOS code is equal to "Hospital Beds," "Oxygen and Supplies," "Wheelchairs," "Other DME," or "Enteral and Parental" were mapped to the DME (11a) service category.

Prosthetics/Orthotics (11b)

All line items where the BETOS code is equal to "Orthotic Devices" were mapped to the Prosthetics and Orthotics (11b) service category.

Renal Diseases (12)

All line items where the BETOS code is equal to "Dialysis Services" were mapped to the Renal Dialysis (12) service category.

Part B Medicare-Covered Drugs (15m)

All line items where the BETOS code is equal to "Other Drugs" were mapped to the Part B Medicare-Covered Drugs (15m) service category. The cost share for Medicare-covered Part B non-chemotherapy drugs was used.

Part B Chemotherapy Drugs (15c)

All line items where the BETOS code is equal to "Chemotherapy Drugs" were mapped to the Drugs (15c) service category. The cost share for Medicare-covered Chemotherapy drugs was used.

Medical/Surgical Supplies (11bs)

All line items where the BETOS code is equal to "Medical/surgical supplies" were mapped to the Medical/Surgical supplies (11bs) service category.

Other line items where the BETOS code is equal to local codes and undefined codes and other non-Medicare fee schedule were excluded from this analysis as these items could not be comfortably mapped into a specific PBP category/benefit.

4.2 PBP Service Categories to Outpatient Claim Mapping

Twenty-four PBP services/benefits were addressed as part of this analysis. These include: Primary Care Physician (PCP), Renal Diseases, Comprehensive Outpatient Rehabilitation Facility (CORF), Ambulatory Surgical Center (ASC), ER Care, Ambulance, Renal Diseases, Mammography Screening, Outpatient Hospital, Urgently Needed Care, Pap Smears/Pelvic Exams, Mental Health, Physical Therapy/Speech, Occupational Therapy (OT), Immunizations, Cardiac Rehabilitation, Therapeutic Radiation, Physician Specialist, Diagnostic Radiological Services, Diagnostic

Tests/Procedures, Outpatient Labs, Hearing Exams, Primary Care Physician (PCP), and Medical/Surgical Supplies. The mapping methodology for these PBP services/benefits to claims in the Outpatient file is presented below, in the order in which they were prioritized by the mapping analysis.

Primary Care Physician (PCP) (7a)

All claims where the BILL TYPE code is equal to "Clinic-Rural," "Clinic-Independent," or "Clinic-Reserved" were mapped to the PCP (7a) service category.

Renal Diseases (12)

All claims where the BILL TYPE code is equal to "Clinic-Hospital Based" or "Independent Renal Dialysis Facility" were mapped to the Renal Dialysis (12) service category.

CORF (3)

All claims where the BILL TYPE code is equal to "Clinic - CORF" were mapped to the CORF (3) service category.

ASC (9b)

All claims where the BILL TYPE code is equal to "Special Facility," "ASC Surgery-Ambulatory Surgical Center," or "ASC Surgery-Rural Primary Care Hospital" were mapped to the ASC (9b) service category.

ER Care (4a)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Emergency Room" were mapped to the ER Care (4a) service category.

Ambulance (10a)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Ambulance" were mapped to the Ambulance (10a) service category.

Renal Diseases (12)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Lab-Non-Routine Dialysis" or "Hemodialysis" were mapped to the Renal Dialysis (12) service category.

Mammography Screening (14h)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Other Imaging Services-Screening Mammography" were mapped to the Mammography Screening (14h) service category.

Outpatient Hospital (9a)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Operating Room Services" were mapped to the Outpatient Hospital (9a) service category.

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Gastro-Intestinal (GI) Services," "Ambulatory Care Services," "Cardiology—Cardiac Cath," or "Lithotripsy" were mapped to the Outpatient Hospital (9a) service category.

Urgently Needed Care (4b)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Clinic-Urgent Care Clinic" were mapped to the Urgently Needed Care (4b) service category.

Pap Smears/Pelvic Exams (14d)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Other Diagnostic Services-Pap Smear" were mapped to the Pap Smears/Pelvic Exams (14d) service category.

Mental Health (7e)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Clinic-Psychiatric," "Medical Social Services," "Psychiatric/Psychological Treatments," or "Psychiatric/Psychological Services" were mapped to the Mental Health (7e) service category.

Physical Therapy/Speech (7i)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Physical Therapy" or "Speech Language Pathology" were mapped to the Physical Therapy/Speech (7i) service category.

Occupational Therapy (7c)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Occupational Therapy" were mapped to the Occupational Therapy (7c) service category.

Immunizations (14b) - Flu Shot

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Vaccine Administration" OR the only REVENUE CENTER code on the claim is equal to "Injection" were mapped to the Immunizations (14b) - Flu Shot service category. These items are assumed to be for influenza vaccinations; however, there is no cost allowed for the influenza vaccine.

Cardiac Rehab (9d)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to “Other Therapeutic Services-Cardiac Rehabilitation” were mapped to the Cardiac Rehab (9d) service category.

Therapeutic Radiation (8br)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to “Radiology-Therapeutic” were mapped to the Therapeutic Radiation (8br) service category.

Physician Specialist (7d)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to “Oncology” were mapped to the Specialist (7d) service category.

Diagnostic Radiological Services (8bd) [selected services]

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to “CT scan,” “MRI,” EKG/ECG,” “EEG,” “PET,” or “Nuclear Medicine” were mapped to the Diagnostic Radiological Services (8bd) [selected services] service category.

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to “Radiology-Diagnostic,” “Other Imaging Services - General,” “Other Imaging Services - Diagnostic Mammography,” “Other Imaging Services - Ultrasound,” or “Other Imaging Services - Other” were mapped to the Diagnostic Radiological Services (8bd) service category.

Diagnostic Tests/Procedures (8ad) [selected services]

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to “Cardiology-General” or “Cardiology - Stress Test” or “Other Diagnostic Services” were mapped to the Clinical/Diagnostic Tests/Procedures Lab (8ad) service category.

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to “Other Therapeutic Services,” “Respiratory Services,” or “Pulmonary Function” were mapped to the Diagnostic Lab (8ad) service category.

Outpatient Labs (8al)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to “Laboratory” were mapped to the Outpatient Labs (8al) service category.

Hearing Exams (18a)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to “Audiology” were mapped to the Hearing Exams (18a) service category.

Primary Care Physician (PCP) (7a)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Clinic—Pediatric," "Professional Fees," "Preventative Care Services—General," or "Treatment or Observation Room" were mapped to the PCP (7a) service category

Medical/Surgical Supplies (11bs)

All previously unmapped outpatient claims where at least one REVENUE CENTER code on the claim is equal to "Medical/surgical supplies" were mapped to the Medical/surgical supplies (11bs) service category.

The remaining claims in the file, comprising 0.5% of the total outpatient claims for the cohort, were excluded from the analysis.

4.3 PBP Service Categories to Physician/Supplier Line Item Mapping

Thirty-two PBP services/benefits were addressed as part of this analysis. These include: Immunizations, Ambulance, Inpatient Hospital (Acute) and Inpatient Psychiatric Hospital, SNF, ER Care, Urgently Needed Care, Primary Care Physician (PCP), Physician Specialist, Psychiatry, Chiropractic, Podiatry, Eye Exams, Hearing Exams, Mental Health, Occupational Therapy (OT), Physical Therapy (PT)/Speech Therapy, Other Healthcare Professionals, Comprehensive Dental, ASC, Mammography Screening, Pap Smears/Pelvic Exams, Renal Diseases, Diagnostic Procedures/Tests, Therapeutic Radiation, Outpatient Labs, Outpatient X-rays, Diagnostic Radiological Services, Outpatient Hospital, Part B Medicare-Covered Drugs, Medical/Surgical Supplies, and Durable Medical Equipment (DME). All other PBP services/benefits not listed were not addressed as part of this analysis.

The methodology for linking Inpatient Hospital and SNF events to line items in the Physician/Supplier file is based on matching the line item last expense date with the Inpatient/SNF Admission and Discharge dates. These benefits/services were considered part of the Inpatient stay, and thus did not generate a separate cost.

The methodology for linking Outpatient services/benefits to line items in the Physician/Supplier file includes selecting all related line items for Outpatient claims mapped to each designated PBP category; that is, line items that occurred on the same day as the Outpatient bill are related to the service/benefit. These line items were bundled under the designated Outpatient service/benefit.

For the remaining line items that do not link to Inpatient Hospital, SNF, or Outpatient claims, the mapping methodology for these PBP services/benefits to line items in the Physician Supplier file are presented below, in order of priority.

Immunizations (14b)

Influenza

1. Medicare policy is that the co-pay for influenza immunizations is equal to $0.

2. All line items where the BETOS code is equal to “Influenza Immunization” were mapped to the Immunizations (14b) service category.

Pneumococcal

1. Medicare Policy is that the co-pay for pneumococcal immunizations is equal to $0.
2. All line items where the SERVICE TYPE code is equal to “Pneumococcal/Flu Vaccine” were mapped to the Immunizations (14b) service category.

Ambulance (10a)

1. All line items that occurred on the same day as an Outpatient ambulance service, where the BETOS code is equal to “Ambulance,” or the PHYSICIAN SPECIALTY code is equal to “Ambulance Service Supplier,” or the PLACE OF SERVICE code is equal to “Ambulance—Land” or “Ambulance—Air or Water,” or the SERVICE TYPE code is equal to “Ambulance,” were bundled under the Outpatient Ambulance service.
2. All previously unmapped line items where the BETOS code is equal to “Ambulance,” or the PHYSICIAN SPECIALTY code is equal to “Ambulance Service Supplier,” or the PLACE OF SERVICE code is equal to “Ambulance—Land” or “Ambulance—Air or Water,” or the SERVICE TYPE code is equal to “Ambulance,” were mapped as an Ambulance service.

Inpatient Hospital - Acute (1a) and Inpatient Psychiatric Hospital (1b)

1. All line items where the Date of the Service is on or within the Inpatient event Admission and Discharge dates and the PLACE OF SERVICE code is equal to “Inpatient Hospital,” “Inpatient Psychiatric Facility,” “ER-hospital,” or “Inpatient Comprehensive Rehab Facility” were bundled under the Inpatient stay.

SNF (2)

1. All line items where the Date of the Service is on or within the SNF event Admission and Discharge dates and the PLACE OF SERVICE code is equal to “Inpatient Hospital,” “ER-hospital,” “Nursing Facility” or “SNF,” or the BETOS code is equal to “Nursing Home Visit” were bundled under the SNF category.

ER Care (4a)

1. All line items that occurred on the same day as an Outpatient ER visit, where the BETOS code is equal to “ER - visit,” or the PLACE OF SERVICE is equal to “Inpatient Hospital,” “Outpatient Hospital,” or “ER,” were bundled under ER.

Urgently Needed Care (4b)

1. All line items that occurred on the same day as an Outpatient Urgent Care visit were bundled under the Outpatient Urgent Care visit.

Primary Care Physician (PCP) (7a)

1. All line items that occurred on the same day as an Outpatient Clinic (independent or rural health) visit were bundled under the PCP category.
2. All line items that occurred on the same day as an Outpatient Clinic (pediatric, treatment, preventative, or professional) visit, where the PLACE OF SERVICE is equal to “Inpatient Hospital,” Outpatient Hospital,” ER,” “ASC,” “Birthing Center,” “Military Treatment Facility,” “Nursing Facility,” or “Other Unlisted Facility” were bundled under the PCP category.
3. All line items where the BETOS code is equal to “Office Visit” (e.g., new or established) or “Consultations,” and where the PHYSICIAN SPECIALTY code is equal to “General Practice,” “Family Practice,” “Internist,” or “Public Health or Welfare Agencies” were mapped as a PCP office visit.
4. All other line items that occurred on the same day (i.e., related items) for a PCP were bundled under the PCP office visit.
5. All previously unmapped line items where the BETOS code is equal to “Hospital Visit,” “Nursing Home or Home Visit,” or “ER Visit,” and where the PHYSICIAN SPECIALTY code is equal to “PCP” (specified above), were mapped as PCP office visit.
6. All other line items that occurred on the same day (i.e., related items) for a PCP office visit were bundled under the PCP visit.
7. All previously unmapped line items where the BETOS code is equal to “Major Procedures,” “Minor Procedures,” “Ambulatory Procedures,” “Eye Procedures,” “Endoscopy,” or “Specialist,” and where the PHYSICIAN SPECIALTY code is equal to “PCP” (specified above), were mapped as a PCP office visit.
8. All other line items that occurred on the same day (i.e., related items) for a PCP were bundled under the PCP office visit.
9. All previously unmapped line items where the BETOS code is equal to “Other - Medicare Fee Schedule,” “Other - Non-Medicare Fee Schedule,” “Local Codes,” or “Undefined Codes,” and where the PHYSICIAN SPECIALTY code is equal to “PCP” (specified above), were mapped as a PCP office visit.
10. All line items where the BETOS code is equal to “Anesthesia,” and the PHYSICIAN SPECIALTY code is equal to “PCP” (specified above), were bundled under the PCP office visit.
11. All previously unmapped line items where the BETOS code is equal to “Office Visit” and where the PHYSICIAN SPECIALTY code is equal to “Diag Lab (GPPP)” or “Diag X-ray” were mapped as a PCP office visit.

Physician Specialist (7d)

1. All line items that occurred on the same day as an Outpatient Specialist visit, and the PLACE OF SERVICE is equal to “Inpatient Hospital,” “Outpatient Hospital,” “ER,” “ASC,” “Birthing Center,” “Military Treatment Facility,” or “Other Unlisted Facility,” were bundled under the Outpatient Specialist visit.
2. All line items where the BETOS code is equal to “Office Visit” (e.g., new or established) or “Consultations,” and where the PHYSICIAN SPECIALTY code is

equal to “Specialist,” “Critical Care (Intensivists),” “Addiction Medicine,” or “Rheumatology,” were mapped as a Specialist office visit.

3. All other line items that occurred on the same day (i.e., related items) for a Specialist were bundled under the Specialist office visit.
4. All previously unmapped line items where the BETOS code is equal to “Hospital Visit,” “Nursing Home or Home Visit,” or “ER Visit,” and where the PHYSICIAN SPECIALTY code is equal to “Specialist” (specified above), were mapped as a Specialist office visit.
5. All other line items that occurred on the same day (i.e., related items) for a Specialist were bundled under the Specialist office visit.
6. All previously unmapped line items where the BETOS code is equal to “Major Procedures,” “Minor Procedures,” “Ambulatory Procedures,” “Endoscopy,” “Eye Procedures,” or “Specialist,” and where the PHYSICIAN SPECIALTY code is equal to “Specialist” (specified above), were mapped as a Specialist office visit.
7. All other line items that occurred on the same day (i.e., related items) for a Specialist were bundled under the Specialist office visit.
8. All previously unmapped line items where the BETOS code is equal to “Oncology – Other” and PLACE is equal to “Office” and TYPE OF SERVICE is NOT equal to “Therapeutic Radiology” were mapped as a Specialist office visit.
9. All previously unmapped line items where the BETOS code is equal to “Other - Medicare Fee Schedule,” “Other - Non-Medicare Fee Schedule,” “Other”, “Local Codes,” or “Undefined Codes,” and where the PHYSICIAN SPECIALTY code is equal to “Specialist” (specified above), were mapped as a Specialist office visit.
10. All line items where the BETOS code is equal to “Anesthesia” and the PHYSICIAN SPECIALTY code is equal to “Specialist” (specified above) were bundled under Specialist.
11. All previously unmapped line items where the BETOS code is equal to “Chiropractic” and where the PHYSICIAN SPECIALTY code is equal to “Specialist” (specified above), were mapped as a Specialist office visit.

Psychiatry (7h)

1. All line items where the BETOS code is equal to "Office Visit" (e.g., new or established) or "Consultations," and where the PHYSICIAN SPECIALTY code is equal to "Psychiatry" or "Neuropsychiatry," were mapped as a Psychiatry office visit.
2. All other line items that occurred on the same day (i.e., related items) for a Psychiatrist were bundled under the Psychiatry office visit.
3. All previously unmapped line items where the BETOS code is equal to "Hospital Visit," "Nursing Home or Home Visit," or "ER Visit," and where the PHYSICIAN SPECIALTY code is equal to "Psychiatry" (specified above), were mapped as a Psychiatry office visit.
4. All other line items that occurred on the same day (i.e., related items) for a Psychiatrist were bundled under the Psychiatry office visit.
5. All previously unmapped line items where the BETOS code is equal to "Major Procedures," "Minor Procedures," "Ambulatory Procedures," "Endoscopy," or "Specialist" and where the PHYSICIAN SPECIALTY code is equal to "Psychiatry" (specified above), were mapped as a Psychiatry office visit.
6. All other line items that occurred on the same day (i.e., related items) for a Psychiatrist were bundled under the Psychiatry office visit.
7. All previously unmapped line items where the BETOS code is equal to "Other - Medicare Fee Schedule," "Other - Non-Medicare Fee Schedule," "Local Codes," or "Undefined Codes," and where the PHYSICIAN SPECIALTY code is equal to "Psychiatry" (specified above), were mapped as a Psychiatry office visit.

Chiropractic (7b)

1. All line items where the PHYSICIAN SPECIALTY code is equal to "Chiropractic" were mapped as a Chiropractic visit.

Podiatry (7f)

1. All line items where the BETOS code is equal to "Office Visit" (e.g., new or established), "Consultations," or "Nursing Home or Home Visit," and where the PHYSICIAN SPECIALTY code is equal to "Podiatry," were mapped as a Podiatry office visit.
2. All other line items that occurred on the same day (i.e., related items) for Podiatry were bundled under the Podiatry office visit.
3. All previously unmapped line items where the BETOS code is equal to "Major Procedures," "Minor Procedures," "Ambulatory Procedures," "Endoscopy," "Hospital visit", or "Specialist," and where the PHYSICIAN SPECIALTY code is equal to "Podiatry," were mapped as a Podiatry office visit.
4. All other line items that occurred on the same day (i.e., related items) for Podiatry were bundled under the Podiatry office visit.

5. All previously unmapped line items where the BETOS code is equal to “Other - Medicare Fee Schedule,” “Other - Non-Medicare Fee Schedule,” “Local Codes,” or “Undefined Codes,” and where the PHYSICIAN SPECIALTY code is equal to “Podiatry,” were mapped as a Podiatry office visit.
6. All previously unmapped line items where the BETOS code is equal to “Hospital Visit,” and where the PHYSICIAN SPECIALTY code is equal to “Podiatry,” were mapped as a Podiatry office visit.

Eye Exams (17a)

1. All line items where the BETOS code is equal to “Office Visit” (e.g., new or established) or “Consultations,” and where the PHYSICIAN SPECIALTY code is equal to “Optometry,” were mapped as an Eye Exam visit.
2. All other line items that occurred on the same day (i.e., related items) for Optometry were bundled under the Eye Exam visit.
3. All previously unmapped line items where the BETOS code is equal to “Hospital Visit,” “Nursing Home or Home Visit,” or “ER Visit,” and where the PHYSICIAN SPECIALTY code is equal to “Optometry” (specified above), or Independent Diagnostic Testing Facility and SERVICE TYPE is equal to Vision items/services, were mapped as an Eye Exam visit.
4. All other line items that occurred on the same day (i.e., related items) for Optometry were bundled under the Eye Exam visit.
5. All previously unmapped line items where the BETOS code is equal to “Major Procedures,” “Minor Procedures,” “Ambulatory Procedures,” “Endoscopy,” “Eye Procedures,” or “Specialist,” and the PHYSICIAN SPECIALTY code is equal to “Optometry,” were mapped as an Eye Exam visit.
6. All other line items that occurred on the same day (i.e., related items) for Optometry were bundled under the Eye Exam visit.
7. All previously unmapped line items where the BETOS code is equal to “Specialist,” and the PHYSICIAN SPECIALTY code is equal to “Independent Diag Testing Facility,” and SERVICE TYPE is equal to “Vision items/services” and PACE is equal to “Office” were mapped as an Eye Exam visit.

Hearing Exams (18a)

1. All line items that occurred on the same day as an Outpatient service for Hearing Exams, where the SERVICE TYPE code is equal to “Hearing items and services,” is bundled under the Outpatient Hearing service.
2. All line items where the PHYSICIAN SPECIALTY code is equal to “Audiologist (billing independently)” were mapped as a Hearing Exam visit.

Mental Health (7e)

1. All line items that occurred on the same day as an Outpatient Mental Health visit, where the PHYSICIAN SPECIALTY code is equal to “Psychiatry,” “Psychologist,”

"Clinical Psychologist," or "Licensed Clinical Social Worker" are bundled under the Outpatient Mental health visit.

2. All previously unmapped line items where the PHYSICIAN SPECIALTY code is equal to "Psychologist (billing independently)," "Clinical Psychologist," or "Licensed Clinical Social Worker" were mapped as a Mental Health visit.

Occupational Therapy (OT) (7c)

1. All line items where the PHYSICIAN SPECIALTY code is equal to "Occupational Therapist" were mapped as an Occupational Therapy visit.

Physical Therapy (PT)/Speech Therapy (7i)

1. All line items where the PHYSICIAN SPECIALTY code is equal to "Physical Therapist" or "Physiotherapy" were mapped as a Physical Therapy visit.
2. All previously unmapped line items where the BETOS code is equal to "Major Procedures," "Minor Procedures," "Ambulatory Procedures," "Endoscopy," "Eye Procedures," or "Specialist," and the PHYSICIAN SPECIALTY code is equal to "Independent Physiological Laboratory," were mapped as a Physical Therapy visit.
3. All previously unmapped line items where the BETOS code is equal to "Other - Medicare Fee Schedule," "Other - Non-Medicare Fee schedule," "Local codes," or "Undefined codes," and where the PHYSICIAN SPECIALTY code is equal to "Independent Physiological Laboratory," were mapped as a Physical Therapy visit.

Other Healthcare Professionals (7g)

1. All line items where the BETOS code is equal to "Office Visit" (e.g., new or established) or "Consultations," and where the PHYSICIAN SPECIALTY code is equal to "Certified Nurse Midwife," "Certified Registered Nurse Anesthetist (CRNA), Anesthesia Assistant," "Nurse Practitioner," "Certified Clinical Nurse Specialist," "Preventive Medicine," or "Physician Assistant," were mapped as an Other Healthcare Professionals office visit.
2. All other line items that occurred on the same day (i.e., related items) for these Physicians were bundled under the Other Healthcare Professionals office visit.
3. All previously unmapped line items where the BETOS code is equal to "Hospital Visit," "Nursing Home or Home Visit," or "ER Visit," and where the PHYSICIAN SPECIALTY code is equal to "Other Healthcare Professionals" (specified above), were mapped as an Other Healthcare Professionals office visit.
4. All other line items that occurred on the same day (i.e., related items) for Other Healthcare Professionals were bundled under the Other Healthcare Professionals office visit.
5. All previously unmapped line items where the BETOS code is equal to "Major Procedures," "Minor Procedures," "Ambulatory Procedures," "Endoscopy," "Eye Procedures," or "Specialist," and where the PHYSICIAN SPECIALTY code is

equal to “Other Healthcare Professionals” (specified above), were mapped as an Other Healthcare Professionals office visit.

6. All other line items that occurred on the same day (i.e., related items) for Other Healthcare Professionals were bundled under Other Healthcare Professionals office visit.
7. All previously unmapped line items where the BETOS code is equal to “Other - Medicare Fee Schedule,” “Other - Non-Medicare Fee Schedule,” “Local Codes,” or “Undefined Codes,” and where the PHYSICIAN SPECIALTY code is equal to “Other Healthcare Professionals” (specified above), were mapped as an Other Healthcare Professionals office visit.
8. All line items where the BETOS code is equal to “Anesthesia” and the PHYSICIAN SPECIALTY code is equal to “CRNA” were bundled under Other Healthcare Professionals office visit.

Comprehensive Dental (16b)

1. All line items where the BETOS code is equal to “Office Visit” (e.g., new or established) or “Consultations,” and where the PHYSICIAN SPECIALTY code is equal to “Oral Surgery (Dentists Only),” were mapped as a Dental office visit.
2. All other line items that occurred on the same day (i.e., related items) for Oral Surgery (Dentists Only) were bundled under the Dental office visit.
3. All previously unmapped line items where the BETOS code is equal to “Major Procedures,” “Minor Procedures,” “Ambulatory Procedures,” “Endoscopy,” or “Specialist,” and where the PHYSICIAN SPECIALTY code is equal to “Dental” (specified above), were mapped as a Dental office visit.
4. All other line items that occurred on the same day (i.e., related items) for Oral Surgery (Dentists Only) were bundled under the Dental office visit.
5. All previously unmapped line items where the BETOS code is equal to “Other - Medicare Fee Schedule,” “Other - Non-Medicare Fee Schedule,” “Local Codes,” or “Undefined Codes,” and where the PHYSICIAN SPECIALTY code is equal to “Oral Surgery (Dentists Only),” were mapped as a Dental office visit.

Ambulatory Surgical Center (ASC) (9b)

1. All line items that occurred on the same day as an Outpatient ASC visit, excluding those where the BETOS code is equal to “Office Visit” or “Consultation” with PLACE OF SERVICE equal to “Office,” were bundled under the ASC visit.
2. All line items where the BETOS code is equal to “Major Procedures,” “Minor Procedures,” “Ambulatory Procedures,” “Endoscopy,” or “Specialist,” and where the PHYSICIAN SPECIALTY code is equal to “Ambulatory Surgical Center,” were mapped as an ASC visit.
3. All other line items that occurred on the same day (i.e., related items) as the ASC visit were bundled under the ASC visit.

Mammography Screening (14h)

1. All line items that occurred on the same day as an Outpatient Mammography Screening, where the BETOS code is equal to "Standard Imaging - Breast," were bundled under Outpatient Screening Mammography.
2. All line items where the PHYSICIAN SPECIALTY code is equal to "Mammography Screening Center" were mapped as a Screening Mammography visit.

Pap Smears/Pelvic Exams (14d)

1. All line items that occurred on the same day as an Outpatient Pap Smear were bundled under Outpatient Pap Smear.

Renal Diseases (12)

1. All line items that occurred on the same day as an Outpatient Dialysis visit, where the BETOS code is equal to "Dialysis services," were bundled under the Outpatient Dialysis service.
2. All previously unmapped line items where the BETOS code is equal to "Dialysis" were mapped as a Dialysis service.

Diagnostic Procedures/Tests (8ad)

1. All previously unmapped line items where the PHYSICIAN SPECIALTY code is equal to "Independent Diagnostic Testing Facility" and the BETOS code is equal to "Major Procedure—cardio", "Minor Procedure", "Ambulatory procedure", or "Local codes" were mapped as a Diagnostic Test/Procedures.

Therapeutic Radiological Services (8br)

1. All line items that occurred on the same day as an Outpatient Radiation Therapy visit, where the BETOS code is equal to "Oncology," were bundled under the Outpatient Radiation Therapy visit.
2. All previously unmapped line items where the BETOS code is equal to "Oncology" were mapped as a Therapeutic Radiation visit.

Outpatient Labs (8al)

1. All line items that occurred on the same day as an Outpatient lab service, and the PLACE OF SERVICE is equal to "Inpatient Hospital," Outpatient Hospital," ER," "ASC," "Birthing Center," "Military Treatment Facility," "Nursing Facility," or "Other Unlisted Facility" were bundled under the Outpatient lab service.
2. All previously unmapped line items where the PHYSICIAN SPECIALTY code is equal to "Clinical Lab (Billing Independently)" were mapped as a Lab service.
3. All previously unmapped line items where the BETOS code is equal to "Lab Tests" or "Other Tests" were mapped as a Lab service.

4. All previously unmapped line items where the BETOS code is equal to “Local codes” or “Specialist,” and the SERVICE TYPE is equal to “Diag. Lab,” were mapped as a Lab service.
5. All previously unmapped line items where the PHYSICIAN SPECIALTY code is equal to “Diagnostic Lab” and the BETOS code is equal to “Minor Procedures”, SERVICE TYPE is equal to “Diag Lab” and PLACE is equal to “Office” were mapped as a Lab service.

Outpatient X-rays (8bx) [selected services]

1. All line items that occurred on the same day as an Outpatient X-ray visit, where the BETOS code is equal to “Imaging,” and the PLACE OF SERVICE is equal to “Inpatient Hospital,” Outpatient Hospital,” ER,” “ASC,” “Birthing Center,” “Military Treatment Facility,” “Nursing Facility,” or “Other Unlisted Facility” were bundled under the Outpatient X-ray visit.
2. All previously unmapped line items where the PHYSICIAN SPECIALTY code is equal to “Portable X-ray Supplier” were mapped as an X-ray visit.
3. All previously unmapped line items where the BETOS code is equal to “Standard imaging,” “Echography,” or “Imaging/Procedure” were mapped as an X-ray visit.
4. All previously unmapped line items where the PHYSICIAN SPECIALTY code is equal to “Diagnostic X-ray” and the BETOS code is equal to “Minor Procedure”, “Ambulatory procedure” and the SERVICE TYPE is equal to “X-ray” were mapped as an X-ray visit.

Diagnostic Radiological Services (8bd) [selected services]

1. All line items that occurred on the same day as an Outpatient complicated X-ray visit, where the BETOS code is equal to “Imaging,” and the PLACE OF SERVICE is equal to “Inpatient Hospital,” Outpatient Hospital,” ER,” “ASC,” “Birthing Center,” “Military Treatment Facility,” “Nursing Facility,” or “Other Unlisted Facility,” were bundled under the Outpatient complicated X-ray visit.
2. All previously unmapped line items where the BETOS code is equal to “Advanced Imaging” were mapped as a complicated X-ray visit. The maximum cost share will be applied to these services.

Outpatient Hospital (9a)

1. All line items that occurred on the same day as an Outpatient Hospital visit, and where the PLACE OF SERVICE is equal to “Inpatient Hospital,” “Outpatient Hospital,” “ER,” “ASC,” “Birthing Center,” “Military Treatment Facility,” “Nursing Facility,” or “Other Unlisted Facility,” were bundled under the Outpatient Hospital visit.
2. All previously unmapped line items where the BETOS code is equal to “Oncology- Other” and PLACE OF SERVICE is equal to “Outpatient Hospital” and TYPE OF SERVICE is equal to “Surgery” were mapped as an Outpatient Hospital service.

3. All previously unmapped line items where the BETOS code is equal to "Chemotherapy" were mapped as an Outpatient Hospital service.
4. All previously unmapped line items where the BETOS code is equal to "Anesthesia" and the PLACE OF SERVICE is equal to "Outpatient Hospital" were bundled under Outpatient Hospital service.

Part B Medicare-Covered Drugs (15m)

1. All previously unmapped line items where the BETOS code is equal to "Other drugs," were mapped as a Medicare-covered Part B Rx Drug benefit.

Medical/Surgical Supplies (11bs)

1. All line items where the BETOS code is equal to "Medical/Surgical Supplies" were mapped as a Medical supplies benefit.

Appendix A: 2005 and 2006 MCBS Documentation

The MCBS is a continuous, multipurpose survey of a representative national sample of the Medicare population, conducted by the Office of Strategic Planning (OSP) of CMS through a contract with Westat. The central goals of the MCBS are: to determine expenditures and sources of payment for all services used by Medicare beneficiaries, including co-payments, deductibles, and non-covered services; to ascertain all types of health insurance coverage and relate coverage to sources of payment; and to trace processes over time, such as changes in health status, spending down to Medicaid eligibility, and the impacts of program changes.

There are approximately 12,000 beneficiaries in every year of the survey. There are 21 survey files, identified by a RIC code. There are also seven claims files that are linked to the survey respondents by a unique identification number.

Of the 21 survey files, there are 12 files that contain information related to the survey respondent and survey information, health status and functioning, health insurance, household composition, facility characteristics (if in a facility), interview information, timeline of events, and survey weights. There are seven files that contain "event" level health care utilization information; they are: Dental, Facility, Inpatient, Institutional, Medical Provider, Outpatient Hospital, and Prescription Drug. There are two utilization summary files, one at the service level (seven categories and home health and hospice) and one at the person level. The event file records are linked to a claim by a claim identification number when there is a claim-generated event or when a survey event can be linked to the claim.

A.1 Cohort Selection

These MCBS files provide the beneficiary information used to screen and select the cohort.

RIC "A" File

Number of records (2005): 12,029
Number of records (2006): 11,984

This is the Administrative Summary file. This file contains historical information from the CMS Medicare enrollment database necessary to establish beneficiary status.

RIC "PS" File

Number of records (2005): 12,029
Number of records (2006): 11,984

This is the Person Summary file. This file summarizes the utilization and expenditures by type of service and the expenditures by payer, yielding one record per person.

RIC "X" File

Number of records (2005): 12,029 (One for each sample person.)

Number of records (2006): 11,984 (One for each sample person.)

This is the Survey Cross-Sectional Weights file. This file contains cross-sectional weights, including general-purpose weights and a series of replicate weights.

RIC "K" File

Number of records (2005): 12,029 (One for each person who completed an interview.)

Number of records (2006): 11,984 (One for each person who completed an interview.)

This is the Key Record file. The Unique Person Identification Number (BASEID) identifies the person interviewed. This file contains the type of interview conducted and other variables for classifying the beneficiary.

RIC "2" File

Number of records (2005): 11,089 (One for each person who completed a community interview.)

Number of records (2006): 11,048 (One for each person who completed a community interview.)

This is the Survey Health Status and Functioning file. This file contains standard measures of Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs) as well as information about the sample person's health, including:

- Self-reported height and weight;
- Self-assessment of vision and hearing;
- Use of preventive measures such as immunizations and mammograms;
- Avoidable risk factors such as smoking; and
- History of medical conditions.

RIC "4" File

Number of records (2005): 12,029 (One for each person who completed an interview.)

Number of records (2006): 11,984 (One for each person who completed an interview.)

This is the Survey Health Insurance file. This file summarizes the health insurance information provided by the sample people including both annual and monthly indicators of health insurance coverage by Medicare, Medicaid, Health Maintenance Organizations (HMOs), Premium Hospital Insurance (PHI), and other public plans.

RIC "8" File

Number of records (2005): 33,418 (One for each interview.)

Number of records (2006): 33,230 (One for each interview.)

This is the Survey Interview file. This file summarizes the characteristics of the interview, including type of questionnaire, duration, and whether or not the interview was conducted with a proxy respondent.

RIC "9" File

Number of records (2005): 12,029 (One for each sample person.)

Number of records (2006): 11,984 (One for each sample person.)

This is the Residence Time Line file. This file tracks the movement of individuals between community, facility, and skilled nursing facility settings. While the majority of respondents have only one setting throughout the year, the records allow for up to twenty occurrences of movement between a community and a facility setting.

A.2 Claims Files Linked to the 2005 and 2006 MCBS

Seven Version I claims files are linked to the MCBS survey respondents by a unique identification number. These bill records represent services provided during calendar years 2005 and 2006 and processed by CMS. Four of the seven files were used in the development of the OOPC calculations. These MCBS files provide the utilization information for the beneficiaries in the survey. Each of the four Version I claims files used to develop the OOPCs are described below.

Home Health Bill

Number of records (2005): 1,914

Number of records (2006): 2,015

This is the Home Health Bill file. This file contains the home health bills for the MCBS population. Home health agencies generally bill on a cycle (e.g., monthly).

Outpatient Bill

Number of records (2005): 44,313

Number of records (2006): 43,011

This is the Outpatient Bill file. This file contains the outpatient bills for the MCBS population. These bills are generally Part B services that are delivered through the outpatient department of a hospital (traditionally, a Part A provider).

Physician/Supplier Bill

Number of records (2005): 459,304

Number of records (2006): 449,502

This is the Physician/Supplier Bill file. This file contains the Medicare Part B (physician, other practitioners, and suppliers including DME) claims for the MCBS population. These records reflect services such as doctor visits, laboratory tests, X-rays and other types of radiological tests, surgeries, inoculations, other services and supplies, and the use or purchase of certain medical equipment.

DME Bill

Number of records (2005): 38,577

Number of records (2006): 37,962

This is the DME file. This file contains the Medicare Part B claims for the MCBS population that involve the use or purchase of certain medical equipment.

A.3 Cost and Use Data Linked to the 2005 and 2006 MCBS

There are sixteen types of records in the Cost and Use portion of the MCBS. These records provide use and cost information about goods and services that the beneficiaries used in calendar year 2005 and 2006, the costs associated with those services, and the share of the costs borne by all payers. Four of the sixteen records were used in the development of the OOPC calculations. Each of the four cost and use records that were used to develop the OOPCs are described below.

RIC "DUE" File

Number of records (2005): 11,734

Number of records (2006): 12,249

This is the Dental Events file. This file contains individual dental events for the MCBS population.

RIC "IPE" File

Number of records (2005): 4,916

Number of records (2006): 4,563

This is the Inpatient Hospital Events file. This file contains individual inpatient hospital events for the MCBS population.

RIC "IUE" File

Number of records (2005): 1,059

Number of records (2006): 1,056

This is the Institutional Events file. This file contains the individual short-term facility (usually SNF) stays for the MCBS population that were reported during a community interview or created through Medicare claims data.

RIC "PME" File

Number of records (2005): 359,566

Number of records (2006): 449,428

This is the Prescribed Medicine Event file. This file contains individual outpatient prescribed medicine events for the MCBS population.

Appendix B: Inflation Factors

To inflate the 2005/2006 costs on the MCBS event files and the Medicare claims to 2011 dollars, CMS provided the following inflation factors.

Table 1			
Fiscal Year	RICIPE (Inpatient Hospital)	RICIUE (SNF)	RICDUE (Dental Prices)
2006	3.7%	3.1%	5.2%
2007	3.4%	3.1%	5.1%
2008	3.3%	3.3%	4.5%
2009	3.6%	3.4%	4.0%
2010	2.1%	2.2%	4.0%
2011	2.6%	2.3%	4.2%

Table 2			
Calendar Year	RICPME (Drugs)		
	Price	Utilization & Intensity per Capita	Total
2006	3.5%	4.0%	7.6%
2007	1.4%	2.0%	3.4%
2008	2.5%	-0.2%	2.3%
2009	3.4%	0.9%	4.3%
2010	3.4%	1.2%	4.6%
2011	3.0%	1.6%	4.6%

Table 3	
Fiscal Year	HHA
2006	3.7%
2007	3.1%
2008	3.0%
2009	2.9%
2010	2.0%
2011	3.0%

Table 4	
Fiscal Year	Outpatient
2006	3.7%
2007	3.4%
2008	3.3%

2009	3.0%
2010	2.1%
2011	2.4%

TABLE 5		
PHYSICIAN/SUPPLIER AND DME BETOS Code	2005-2011 Increase	2006-2011 Increase
D1A:Medical/surgical supplies	1.00	1.00
D1B:Hospital beds	1.00	1.00
D1C:Oxygen and supplies	1.00	1.00
D1D: Wheelchairs	1.00	1.00
D1E:Other DME	1.00	1.00
D1F:Orthotic devices	1.12365	1.12365
I1A:Standard imaging – chest	1.03236	1.03236
I1B:Standard imaging - musculoske	1.03236	1.03236
I1C:Standard imaging – breast	1.03236	1.03236
I1D:Standard imaging - contrast g	1.03236	1.03236
I1E:Standard imaging - nuclear me	1.03236	1.03236
I1F:Standard imaging – other	1.03236	1.03236
I2A:Advanced imaging - CAT: head	1.03236	1.03236
I2B:Advanced imaging - CAT: other	1.03236	1.03236
I2C:Advanced imaging - MRI: brain	1.03236	1.03236
I2D:Advanced imaging - MRI: other	1.03236	1.03236
I3A:Echography – eye	1.03236	1.03236
I3B:Echography - abdomen/pelvis	1.03236	1.03236
I3C:Echography – heart	1.03236	1.03236
I3D:Echography - carotid arteries	1.03236	1.03236
I3E:Echography - prostate, transr	1.03236	1.03236
I3F:Echography – other	1.03236	1.03236
I4A:Imaging/procedure	1.03236	1.03236
I4B:Imaging/procedure – other	1.03236	1.03236
M1A:Office visits – new	1.03236	1.03236
M1B:Office visits – established	1.03236	1.03236
M2A:Hospital visit – initial	1.03236	1.03236
M2B:Hospital visit – subsequent	1.03236	1.03236
M2C:Hospital visit - critical car	1.03236	1.03236
M3 :Emergency room visit	1.03236	1.03236
M4A:Home visit	1.03236	1.03236
M4B:Nursing home visit	1.03236	1.03236
M5A:Specialist – pathology	1.03236	1.03236
M5B:Specialist – psychiatry	1.03236	1.03236
M5C:Specialist – opthamology	1.03236	1.03236
M5D:Specialist – other	1.03236	1.03236
M6 :Consultations	1.03236	1.03236
O1A:Ambulance	1.15174	1.12365

TABLE 5		
PHYSICIAN/SUPPLIER AND DME BETOS Code	2005-2011 Increase	2006-2011 Increase
O1B:Chiropractic	1.03236	1.03236
O1C: Enteral and Parental	1.15174	1.12365
O1D:Chemotherapy	1.12292	1.15527
O1E:Other drugs	1.12292	1.15527
O1F:Vision, hearing and speech se	1.12472	1.12472
O1G:Influenza immunization	0.92314	0.84305
P0 :Anesthesia	1.03236	1.03236
P1A:Major procedure – breast	1.03236	1.03236
P1B:Major procedure - colectomy	1.03236	1.03236
P1C:Major procedure - cholecystec	1.03236	1.03236
P1D:Major procedure – turp	1.03236	1.03236
P1E:Major procedure - hysterctomy	1.03236	1.03236
P1F:Major procedure - explor/deco	1.03236	1.03236
P1G:Major procedure – Other	1.03236	1.03236
P2A:Major procedure, cardiovascul	1.03236	1.03236
P2B:Major procedure, cardiovascul	1.03236	1.03236
P2C:Major Procedure, cardiovascul	1.03236	1.03236
P2D:Major procedure, cardiovascul	1.03236	1.03236
P2E:Major procedure, cardiovascul	1.03236	1.03236
P2F:Major procedure, cardiovascul	1.03236	1.03236
P3A:Major procedure, orthopedic -	1.03236	1.03236
P3B:Major procedure, orthopedic -	1.03236	1.03236
P3C:Major procedure, orthopedic -	1.03236	1.03236
P3D:Major procedure, orthopedic -	1.03236	1.03236
P4A:Eye procedure - corneal trans	1.03236	1.03236
P4B:Eye procedure - cataract remo	1.03236	1.03236
P4C:Eye procedure - retinal detac	1.03236	1.03236
P4D:Eye procedure – treatment	1.03236	1.03236
P4E:Eye procedure – other	1.03236	1.03236
P5A:Ambulatory procedures - skin	1.03236	1.03236
P5B:Ambulatory procedures - muscu	1.03236	1.03236
P5C:Ambulatory procedures - ingui	1.03236	1.03236
P5D:Ambulatory procedures - litho	1.03236	1.03236
P5E:Ambulatory procedures - other	1.03236	1.03236
P6A:Minor procedures – skin	1.03236	1.03236
P6B:Minor procedures - musculoske	1.03236	1.03236
P6C:Minor procedures - other (Med	1.03236	1.03236
P6D:Minor procedures - other (non	1.03236	1.03236

TABLE 5		
PHYSICIAN/SUPPLIER AND DME BETOS Code	2005-2011 Increase	2006-2011 Increase
P7A:Oncology - radiation therapy	1.03236	1.03236
P7B:Oncology – other	1.03236	1.03236
P8A:Endoscopy – arthroscopy	1.03236	1.03236
P8B:Endoscopy - upper gastrointes	1.03236	1.03236
P8C:Endoscopy – sigmoidoscopy	1.03236	1.03236
P8D:Endoscopy – colonoscopy	1.03236	1.03236
P8E:Endoscopy – cystoscopy	1.03236	1.03236
P8F:Endoscopy – bronchoscopy	1.03236	1.03236
P8G:Endoscopy - laparoscopic chol	1.03236	1.03236
P8H:Endoscopy – laryngoscopy	1.03236	1.03236
P8I:Endoscopy – other	1.03236	1.03236
P9A:Dialysis services	1.03236	1.03236
P9B:P9B	1.03236	1.03236
T1A:Lab tests - routine venipunct	0.96334	0.96334
T1B:Lab tests - automated general	0.96334	0.96334
T1C:Lab tests – urinalysis	0.96334	0.96334
T1D:Lab tests - blood counts	0.96334	0.96334
T1E:Lab tests – glucose	0.96334	0.96334
T1F:Lab tests - bacterial culture	0.96334	0.96334
T1G:Lab tests - other (Medicare f	0.96334	0.96334
T1H:Lab tests - other (non-Medica	0.96334	0.96334
T2A:Other tests – electrocardiogr	1.03236	1.03236
T2B:Other tests - cardiovascular	1.03236	1.03236
T2C:Other tests - EKG monitoring	1.03236	1.03236
T2D:Other tests - other	1.03236	1.03236
Y1 :Other - Medicare fee schedule	1.03236	1.03236
Y2 :Other - non-Medicare fee sche	1.03236	1.03236
Z1 :Local codes	1.03236	1.03236
Z2 :Undefined codes	1.03236	1.03236

Appendix C: 2012 Part D Benefit Assumptions – MA-PD & PDP Plans

APPENDIX C TABLE 1				
2011 Medicare Part D Cost Share and Cost Limit Parameters	**Defined Standard**	**Actuarially Equivalent**	**Basic Alternative**	**Enhanced Alternative**
Pre-ICL Cost Shares	25%	25% or Tiers	25% or Tiers	25% or Tiers or No Cost Sharing
Pre-Deductible (First Dollar Generic Coverage)	No Coverage	No Coverage	Yes, optional* ***If Yes, cost shares specified for generic drugs only.**	Yes, optional* ***If Yes, cost shares specified for generic drugs only.**
Deductible	$320	$320	$320* or Plan-specified* or No Deductible ***Applies to brand drugs only if first dollar coverage exists.**	$320* or Plan-specified* or No Deductible ***Applies to brand drugs only if first dollar coverage exists.**

APPENDIX C TABLE 1				
2011 Medicare Part D Cost Share and Cost Limit Parameters	**Defined Standard**	**Actuarially Equivalent**	**Basic Alternative**	**Enhanced Alternative**
ICL	$2,930	$2,930	$2,930	$2,930 or Plan-specified or No ICL *Partial Gap Coverage if greater than $2,930 **Full Gap Coverage
Gap Coverage	No Coverage	No Coverage	No Coverage	No Coverage or ICL Adjustment (see above) or Gap Tiers
Threshold (TROOP)	$4,700	$4,700	$4,700	$4,700
Threshold (Fixed Capitated Demos)	N/A	N/A	N/A	$6,657.50
Post-Threshold Cost Shares	Greater of $2.60 or 5% for generics (including brands treated as generic, or Greater of $6.50 or 5% for all other drugs	Greater of $2.60 or 5% for generics (including brands treated as generic, or Greater of $6.50 or 5% for all other drugs or Post-Threshold Tiers or No Cost Sharing	Greater of $2.60 or 5% for generics (including brands treated as generic, or Greater of $6.50 or 5% for all other drugs or Post-Threshold Tiers or No Cost Sharing	Greater of $2.60 or 5% for generics (including brands treated as generic, or Greater of $6.50 or 5% for all other drugs or Post-Threshold Tiers or No Cost Sharing
Excluded Drugs Maximum Benefit Coverage Limit	N/A	N/A	N/A	Yes, optional*. ***Coverage limit applies to Excluded Drugs tier only.**
Free First Fill	N/A	N/A	Yes, optional*. ***Apply $0 co-pay to first Rx.**	Yes, optional*. ***Apply $0 co-pay to first Rx.**

APPENDIX C TABLE 1				
2011 Medicare Part D Cost Share and Cost Limit Parameters	**Defined Standard**	**Actuarially Equivalent**	**Basic Alternative**	**Enhanced Alternative**
Charge Lesser of Copayment or Cost of the Drug	N/A	Yes, optional*.	Yes, optional*.	Yes, optional*.

Note: Preliminary.

List of Acronyms

AHC	Acute Heart Condition
APC	Ambulatory Procedure Code
ASC	Ambulatory Surgical Center
BASEID	Unique Person Identification Number
BETOS	Berenson-Eggers Type of Service
CBC	Center for Beneficiary Choices
CSP	Center for Strategic Planning
CMS	Centers for Medicare & Medicaid Services
CORF	Comprehensive Outpatient Rehabilitation Facility
CT	Computed Tomography
CHF	Congestive Heart Failure
CY	Contract Year
DCG	Diagnostic Cost Group
DUE	Dental Utilization Event
DME	Durable Medical Equipment
ECG	Electrocardiography
EEG	Electroencephalography
EKG	Electrocardiography
ER	Emergency Room
ESRD	End-stage Renal Disease
GI	Gastro-intestinal
HCPCS	Healthcare Common Procedure Coding System
HHA	Home Health Agencies
HCC	Hierarchical Condition Category
HMO	Health Maintenance Organization
IPE	Inpatient Event
MA	Medicare Advantage
MA - PD	Medicare Advantage with Prescription Drug
MDS	Minimum Data Set
MCBS	Medicare Current Beneficiary Survey
MOC	Medicare Options Compare
MPE	Modern Provider Event
MRI	Magnetic Resonance Imaging
OACT	Office of the Actuary
OM	Original Medicare
OOPCs	Out-of-pocket Costs
OSP	Office of Strategic Planning
OT	Occupational Therapy
PBP	Plan Benefit Package
PCP	Primary Care Physician
PDE	Prescription Drug Event

PDP	Prescription Drug Plans
PET	Positron Emission Tomography
PHI	Premium Hospital Insurance
PME	Prescribed Medicine Event
PPS	Perspective Payment System
PT	Physical Therapy
RIC	Record Identification Code
RICDUE	Record Identification Code - Dental Services
RICIPE	Record Identification Code - Inpatient Hospital
RICIUE	Record Identification Code - Skilled Nursing Facility
RICMPE	Record Identification Code - Medical Provider Events
RICPS	Record Identification Code - Personal Summary
RXCUI	RxNorm Concept Unique Identifiers
SNF	Skilled Nursing Facility
SNP	Special Needs Plan
VA	Veterans Administration